

Students' friend Carlisle dies after long illness

William H. Carlisle, Jr., 62, who had devoted his efforts for nearly forty years to helping students at the Massachusetts Institute of Technology, died Monday, January 23, in Mount Auburn Hospital after a long illness.

After attending MIT from 1924 to 1928, Mr. Carlisle became assistant manager of Dining Service, with the special responsibility for student waiters. He originated and for more than three decades was the advisor for the annual Assemblies Ball. In 1951 he became manager of student personnel, with the responsibility of arranging jobs for all students wishing to work part-time.

Sigma Chi member

A leading member of Sigma Chi fraternity, Mr. Carlisle was advisor to the MIT chapter and then grant praetor, or chief national officer, for the New England-Nova Scotia Province. He became dean of the Praetorial College of the fraternity last fall.

Mr. Carlisle was a leader in founding a DeMolay chapter at MIT and was charter advisor for the group. He was a past master of the Richard C. MacLaurin

Lodge of Masons and former district deputy commander of the order.

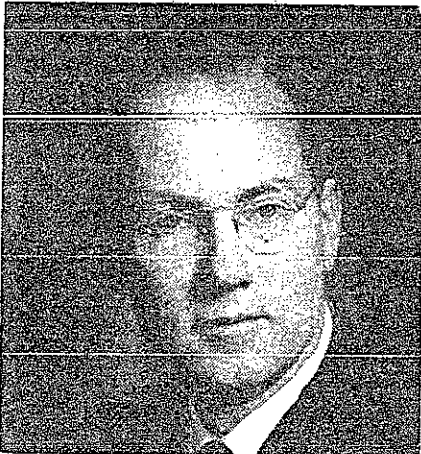
Honored by Johnson

Mr. Carlisle was given the Gordon Billard Award by President Howard W. Johnson in recognition of his outstanding service to the community.

Dr. Charles H. Townes assumes presidency of Am. Phys. Society

Dr. Charles H. Townes, Institute Professor of Physics at MIT, took office as President of the American Physical Society February 2, at the conclusion of the society's annual meeting at the New York Hilton Hotel.

Dr. Townes, a pioneer in the



Dr. Charles H. Townes

field of quantum electronics, is internationally known for his research in the specialized field of microwave physics, and for his work on the theory and development of masers and lasers. Dr. Townes received his Bachelor's degrees in Physics and Modern Languages from Furman University, graduating summa cum laude at the age of 19. He took his M.S. at Duke, and received his doctorate from Caltech in 1939.

Alpha Phi Omega installs officers for spring term

The following Brothers of Alpha Chi Chapter of Alpha Phi Omega have been elected by the Chapter to serve as officers for the Spring Term, 1967: President, Robert Young '68; Service Vice President, Ronald Rosen '68; Social Vice President, Patrick March '69; Treasurer, Timothy Romlein '69.

Also elected were Publicity Director, Arthur Polansky '69; Publications Director, Michael Timko '69; Corresponding Secretary, Joseph Durazzi '69; Recording Secretary, Larry Viehland '69; and Historian, Robert Boyd '69.

The retiring officers of Alpha Phi Omega are headed by President Gardiner Gay '68.

Chilean Senate halts Frei lecture

By Mark Bolotin

The Karl Taylor Compton Lecture, which was to have been given Friday by President Eduardo Frei Montalvo of the Republic of Chile, has been cancelled due to the inability of President Frei to leave his country.

Senate intervenes

Acting on an obscure 1833 law requiring congressional approval for all presidential trips abroad, the Chilean Senate voted to deny

Frei permission to make his first state visit to the United States. The original intent of the law was to prevent presidents from taking long European vacations, but this marks the first time that this power has been used.

Following the Senate's decision to keep Frei in the country, Frei made an attempt to have their vote overturned in the Chamber of Deputies, where a majority vote would send it on to the Sen-

ate for a second try. However, he was unable to change the Senate's decision.

On his trip to the United States, Frei was scheduled to make stops in Miami and Williamsburg, Va., before continuing on to Washington. In Washington, he had scheduled two meetings with President Lyndon Johnson on such topics as prospects for Latin-American denuclearization, the projected inter-American peace force, streamlining of the Alliance for Progress, Latin-American integration, and reforms in the inter-American judicial system.

United Nations address

Also included in President Frei's plans was a trip to New York in order to address the United Nations. From New York, he was to continue to Boston as the guest of President Nathan M. Pusey of Harvard University and President Howard Johnson. President Frei's scheduled Compton lecture was supposed to be on 'The Changing Balance Between Economic Development and Social Progress.'

New board takes The Tech posts

By Paul Johnston

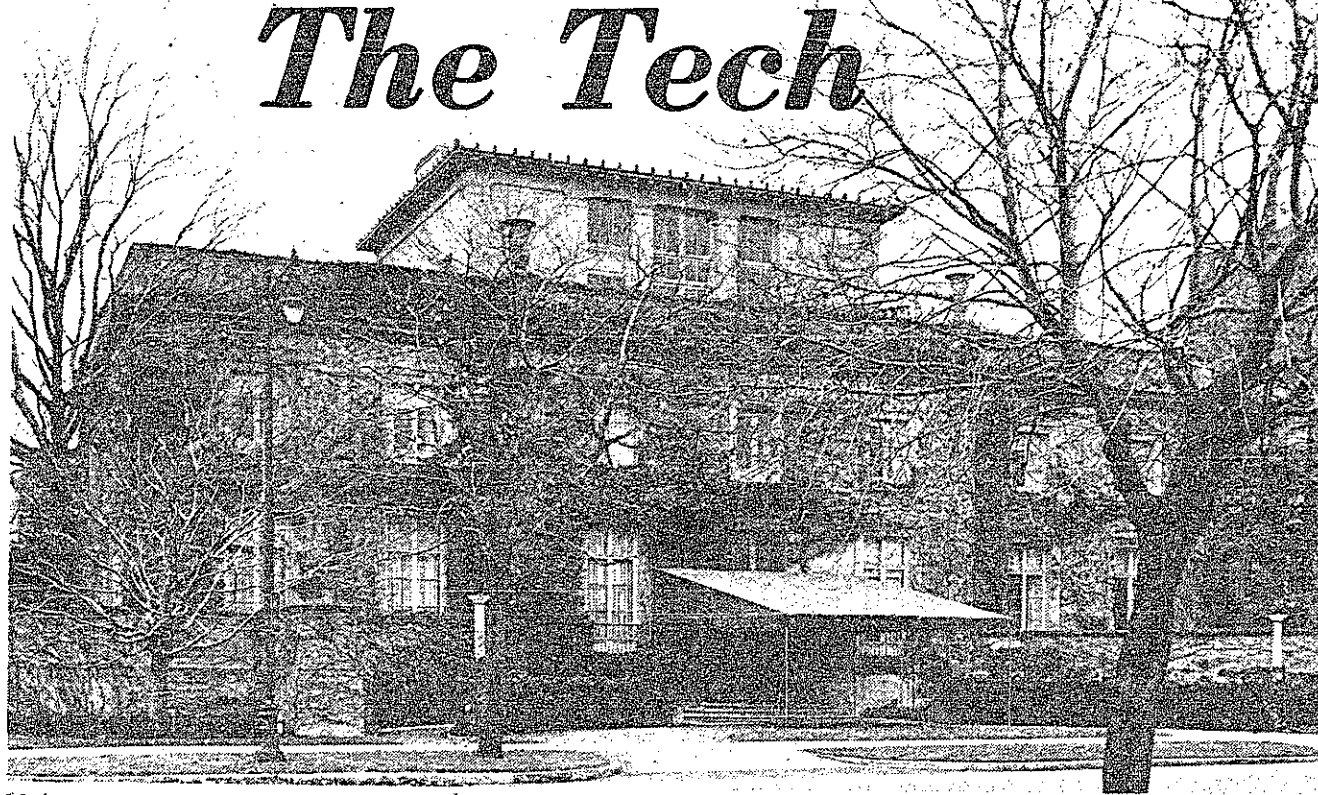
The Board of Directors for Volume 87 of The Tech was elected at a pre-inter-session meeting of the old Board. The new Board officially assumes its duties with this issue of the newspaper.

Guille Cox '68 of SAE, takes over as Chairman of the Board. Guille was Business Manager for Volume 86. The Editor will be Mike Rodburg '68 of AEP; Mike served on Volume 86 as Features Editor. Managing Editors for the new volume will be John Corwin '68 of TDC and Tom Thomas '69 of SAE. Tom was Sports Editor of Volume 86.

Other Board Members for the new volume include Dan Green '68 of KS, who will be Business Manager, Mark Bolotin '68 of Burton House, the new News Editor, and Mickey Warren '69 of AEP, who will be Features Editor.

Tony Lima '69 of KS will be the new Sports Editor, and Jack Donahue '69 of Burton House will be the Entertainment Editor. The Photography Editor will be Bill Ingram '68 of Burton House. Business Representative will be Nick Covatta '68 of SAE, who served in the same post on Volume 86.

Three Editorial Consultants have also been elected. They are Gerry Banner '68 of AEP, Dave Kress '67 of TC, and Mark McNamee '68 of TX. Gerry was News Editor of Volume 86. Dave was Chairman, and Mark was a Managing Editor.



Vol. 87, No. 1

Cambridge, Massachusetts, Tuesday, February 7, 1967

Five Cents

Three in top five

Math team 2nd in Putnam

MIT placed second in the twenty-seventh annual William Lowell Putnam Mathematical Competition November 19, 1966. Three MIT students were among the top-five ranking individuals in the contest, which was sponsored by the Mathematical Association of America.

The Putnam Competition is the major intercollegiate contest in an academic subject. All colleges and universities in the United States and Canada are invited to participate; this year 259 students registered, and a total of 1,526 wrote the examination.

Sixth second place

The five winning intercollegiate teams were, in order: (1) Harvard University; (2) MIT; (3) the University of Chicago; (4) the University of Michigan; (5) Princeton University. MIT has placed second in the competition six times; this was Harvard's ninth victory. MIT team members were Theodore C. Chang '67, Gerald S. Gras '69, and Michael R. Rolle '67.

In individual competition the top five were (in alphabetical order) Marshall W. Buck (Harvard), Chang, Robert E. Mass (the University of Santa Clara), Richard C. Schroepel '68, and Robert S. Winternitz '68. Gras was in the next ten ranking individuals.

Seventy-five-dollar awards

Each member of the top-five group receives an award of seventy-five dollars, and one will be selected to receive the William

Lowell Putnam Scholarship at Harvard. Each MIT team member received forty dollars; in addition, four hundred dollars was awarded to the MIT Mathematics Department.

The examination consisted of twelve problems selected to test the students' mathematical ingenuity. Most of the problems in-

cluded on the test were original, and rarely would a contestant have seen any problems similar to those appearing on the examination. The student was expected, during the all-day examination, to devise his own methods for each solution. The top contestants displayed a considerable amount of ingenuity in their solutions.

Inventor Van de Graaff dies; had developed particle accelerator

By Sue Downs

Dr. Robert J. Van de Graaff, inventor of the Van de Graaff particle accelerator, died in the Massachusetts General Hospital, January 16, at the age of 65.

The accelerator, chief product of the High Voltage Engineering Corp. of Burlington was completed in 1933.

Under Van de Graaff's inventive genius, the machine grew larger and more elaborate, acquiring more and more uses in fundamental physics research, industry and medicine.

By accelerating the nuclei of heavier atoms with low energy, this machine provides physicists with information on the structure of an intact atomic nucleus.

Simplicity Of Design

"What distinguishes Dr. Van de Graaff's apparatus from its predecessors is its extraordinary simplicity, for all its size," reports the New York Times in 1933. The usual proceeding is to generate electrons by means of a dynamo, and then to increase the

(Please turn to Page 2)

Electron microscope lab set up

By Cary Bullock

An electron Microscope Facility and adjoining Instrument Laboratory have been established in the Department of Chemical Engineering at MIT. The objective is to increase the scope and depth of research and teaching carried out by department faculty and students.

Two electron microscopes included

The facility includes two electron microscopes, photo enlarging equipment, and a certain amount of sample preparation equipment. The Instrument Laboratory includes a variety of equipment for analysis and measurements, which include instruments for gas and liquid chromatography, spectroscopy, light-scattering photometry, adsorption phenomena, and differential temperature analysis.

Of the two electron microscopes in the facility, one is capable of magnification ranging from 3,000 to 219,000 diameters; the other is capable of 1200 to 12,000 diameters in magnification range. The best light microscopes magnify only up to 1,500 diameters.

Greater magnification possible

The photo enlarging equipment makes it possible

to enlarge photographic images from the microscopes up to 10 times their original size. Thus, using the larger microscope at maximum magnification plus enlargement, experimenters may ob-

(Please turn to Page 5)



Professor Allen B. Douglas supervises the use of one of the two electron microscopes in the Department of Chemical Engineering.

Instrumentation Lab guides Apollo

By Paul Johnston

The guidance and navigation system three Apollo astronauts will use to steer their way to the moon and back is the work of MIT's Instrumentation Laboratory.

Self-sufficient system

This system is self-sufficient, flexible, and makes maximum use of the capabilities of both man and machine. It can be programmed to perform guidance and navigation functions for an entire mission. In-flight modifications of flight plans and trajectories are easily accommodated, by the hardware.

Astronauts try out system

System theory, mechanization, mission programming, and the ability of men to use the system effectively are continually tested and proven in simulation-type devices located at the laboratory where the Guidance and Navigation (G & N) system was designed. Many of the astronauts, including the late Ed White, worked with the system from time to time at the Instrumentation Laboratory.

The system consists of three major sub-units: inertial measurement unit (IMU), a computer unit, and optical unit. Inside the spacecraft, the G & N system mounts on the wall of the lower equipment bay at the feet of the astronaut occupying the middle couch. The IMU holds a stable on-board frame of reference, and measures spacecraft accelerations within this frame of reference.

Inside the I M U

At the heart of the IMU sphere are three gyroscopes and three accelerometers recessed into a metal fixture. These instruments make up the stabilized inner member. This is suspended inside three concentric spherical gimbals connected to each other by drive motors and angle (read out) resolvers. The gyros and accelerometers are sensing degree-of-freedom, sensing motions act-

ing only along their input axes. The axes are aligned orthogonally, one for each of the principal directions of motion, pitch, roll, and yaw. By summing what each instrument senses, the G & N system determines the resulting actual motion of the craft, and takes appropriate action by generating control signals for the spacecraft rocket system.

Re-alignment before use

Since the IMU is often turned off during long periods of free coasting trajectory in order to save electrical power, it requires initial re-alignment to the stars before each use. One of the jobs the astronaut-operator has in using the system is this IMU alignment using the G & N optical unit. The optical unit consists primarily of a wide angle of view, unity-power scanning telescope, and a 28 power magnification narrow field of view space sextant. The astronaut uses the scanning telescope to locate desired star fields and landmarks. He then uses the sextant to measure directions to and angles between stars for navigation data.

Computer operation

The guidance computer is a general purpose digital machine of versatile design configured for deep space flight use. Astronaut and computer communicate in a number language via a 21-digit character display and a 16-button keyboard. The astronaut punches data and commands into the system. These are displayed to him for verification in electro-luminescent counter-type windows. The computer displays readout numbers in the same windows.

N A S A contract

The system was designed and developed by engineers and scientists at the MIT Instrumentation Lab, under contract from NASA's Manned Spacecraft Center, Houston. The Laboratory was founded 25 years ago and continues to be directed by Prof. Charles S. Draper, sometimes called the father of inertial guidance in the USA.

While the tragic deaths of the three Apollo astronauts in their capsule January 27 is expected to delay Project Apollo by at least six months, no serious delay is foreseen in the work being done at the Instrumentation Laboratory. Possible causes for the capsule fire include the Environmental Control System, the wiring system, or the explosion of batteries inside the craft. None of these causes are directly linked to the Instrumentation Lab-designed hardware. However, a major redesign of the system will necessitate reprogramming the on-board computers.

Van de Graaff came to MIT from Princeton

(Continued from Page 1)

voltage by means of a complicated transformer."

"This is expensive, difficult and cumbersome." The generator consisted of two units each with a polished aluminum sphere fifteen feet in diameter.

Professor At MIT

From 1934 until his retirement in 1960, Van de Graaff was an Associate Professor of Physics at MIT. Born in Tuscaloosa, Ala., he received his BS and MS in mechanical engineering from the University of Alabama. He received his doctorate degree from Oxford University, where he studied as a Rhodes Scholar.

His work leading to the accelerator was done at Princeton University under physicist Karl Compton. When Compton moved to MIT and became president, Van de Graaff followed.

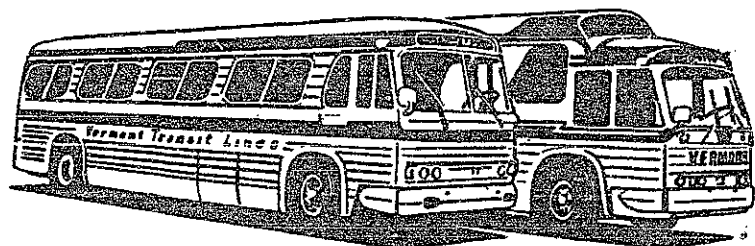
It was under Compton's encouragement that Van de Graaff scaled up his first crude electrostatic generator into a machine that developed 5.4 million volts.

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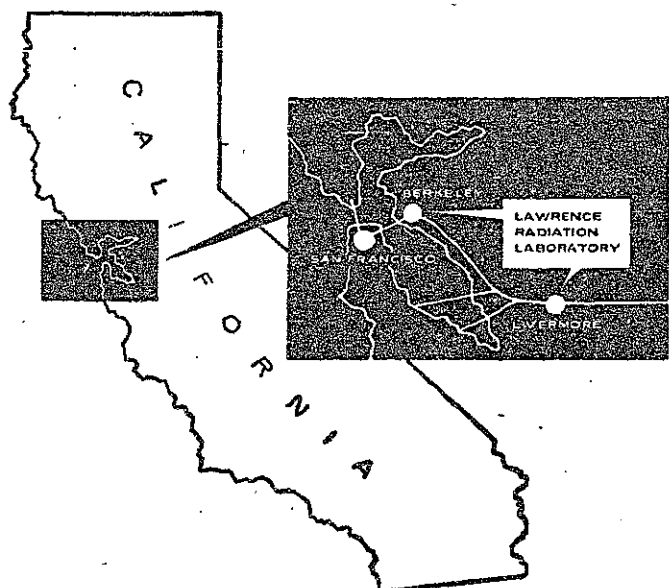
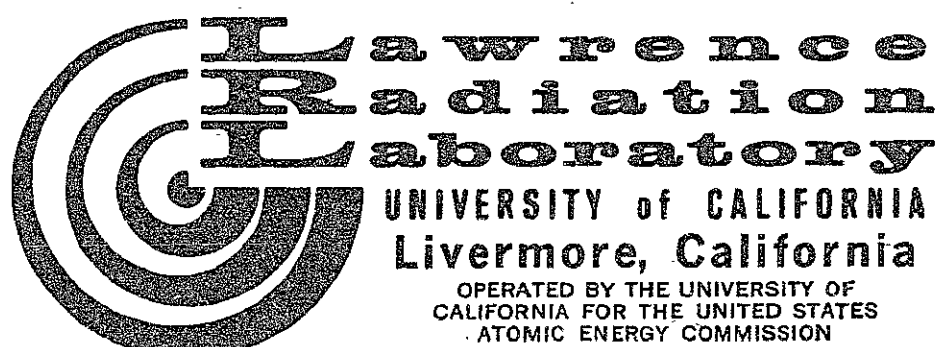
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Dr. Weisskopf to chair AEC high energy panel

Professor Victor F. Weisskopf, in this capacity in the national Head of the Department of Physics, has been appointed the first chairman of an advisory panel on high energy physics. The panel established by the Atomic Energy Commission, will provide advice and guidance to the Commission concerning research on high energy physics.

To Aid AEC

The basic goal of the panel will be to direct the actions of the AEC towards a vigorous and productive national high energy physics program.

Professor Weisskopf is highly respected for his sound judgment and scientific achievements. He returned to MIT about a year ago from Switzerland where he had served since 1961 as Director General of the European Organization for Nuclear Research (CERN).

Twelve Scientists

The panel is composed of twelve physical scientists. The members have been selected to achieve a reasonable balance of competence in theoretical and experimental research, and competence in accelerator design and utilization, and to include scientists associated with laboratories and universities. The members will serve

interest and not as representative of their respective organizations or geographical regions.

Among the members of the panel are Dr. Rodney L. Cool of Brookhaven National Laboratory, Professor Robert G. Sachs of Argonne National Laboratory, and Professor Robert L. Walker of California Institute of Technology.

Steinberg leads visitors to Tassil mountain caves

Professor Arthur Steinberg of the Department of Humanities has been guiding a month-long expedition sponsored by the Archaeological Institute of America. The tour, the first in a series under Institute auspices designed to raise \$500,000, is extending from Morocco to Sicily.

A highpoint of the expedition is the prehistoric cave painting in the Tassil mountains of southern Algeria. To reach the famous, but seldom-seen caves, requires an arduous desert crossing. The last ten days of the trip will be a swing around the archaeological sites of Sicily.

Engineers:

Meet Boeing

Campus Interviews Tuesday, Thursday and Friday February 21, 23 and 24

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4 score and 7

This issue represents the first effort of the new editorial board for Volume 87. We bring with us our own ideas and our own style, yet we are mindful of a continuing obligation to maintain the standards and traditions of the past.

Our first duty as the official undergraduate newspaper is to provide our readers with clear, impartial, and accurate accounts of events and interests of the students and the entire MIT community. We hope to provide an entertaining, informative, and lively newspaper covering as full a range of the Institute's many facets as possible.

In addition, we feel an obligation to take an active interest in the affairs of the campus, to illuminate matters where the details may be obscure, and to comment on the particular issues of the day. As in the past, it is our belief that we do not have any specialized knowledge of or insight into events of a national nature, hence we do not feel competent to comment in this field. But within the broad area of campus concern we will present our own views of the issues.

Where there is disagreement with our views, we will remember that this page is a forum for dissent as well. We encourage letters, and in particular, we hope to print guest editorials from concerned and responsible members of the community.

The ultimate judges of our efforts are the readers. Only they can enlighten us as to our failings. We welcome criticism, but of even more value are suggestions and ideas from the readership. As we experiment on our own in exploring new areas and covering new topics, we need the kind of support an interested student body can provide.

We of Volume 87 will give our best to make The Tech the enlightened publication MIT undergraduates need and deserve.



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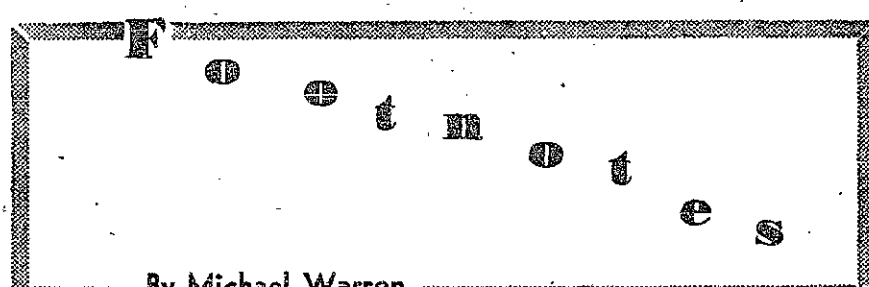
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By Michael Warren

The initial footnotes of Volume 87 will generally follow the pattern set by the footnoters of two preceding volumes. The column will try to present information relevant to the MIT community in the form of anecdotes, rumors, both substantiated and otherwise, articles of interest that are not news stories, and any other things that strike the author's fancy.

1. Members of the Class of '69 seemed a little dismayed when grade reports were opened last week. Many of the students taking 8.03 had a little shock awaiting them in the form of a grade lower than anticipated. Those who expected the course to be graded on the lines of 8.01 and 8.02 learned how mistaken they had been.

A professor in charge of two sections of 8.03 said that this term's grades were not noticeably different from those of the preceding semester. Although an exact breakdown of the grades was not available, there were about 10 to 12 percent A's and a similar amount of F's. The distribution of the remaining grades indicated that the course was solidly C centered.

2. An Associate Professor of Physics at Peking University has jotted down some thoughts on the American educational process, drawing from his years of

study at Harvard. Huang Ch'ang's impressions of American students were: "They are busy with money all day long and have no heart for study; They do not, or dare not inquire about politics, being afraid of getting themselves into trouble; They worship money and are doped by religion; They are decadent, degenerate, and morally corrupt."

Huang's analysis of the educational scene included the MIT "school regulation" that freshmen are to be blindfolded and taken out to suburban Boston by upperclassmen, and then left to find their way back in the dark. Huang noted that "To girl students the Harvard campus means a prohibited area to be dreaded. . . . It has been the scene of robberies, molestations and all sorts of bad things." He concluded that "American educational enterprises are rotting."

3. Techmen should keep their eyes and ears open for an announcement on the length of this term's reading period. The Committee on Educational Policy has given its approval to a week-long reading period, and the question is now awaiting consideration by other faculty committees. Action might be taken as early as this week, and an announcement could be forthcoming any time afterwards.

College World

By Stan Kask

Psychology has just become established here at MIT and before long the Tech Tools might be subjected to tests similar to one imposed upon a Southwest Missouri State College Psychology class. A gunshot resounded through the classroom and the professor slumped to the floor. The class was dumbfounded. Normality returned when the professor resurrected himself and explained that the test was designed to determine a group reaction to emotional stress.

The group reaction to the experiment—"I feel like a fool."

Cafeteria Boycott

Students at Hunter College in New York decided that they had had enough of the campus cafeteria. The result was a boycott. The students at Hunter encountered many problems with the cafeteria management and broke off negotiations stating that "The cafeteria management appears only to hold the students in contempt."

The students charged that prices were higher than at any other New York college cafeteria. The management replied that their hamburgers cost more because they weighed more than hamburgers of the other city college cafeterias.

Nevertheless, after three days of diligent boycotting, the management gave in and awarded the students price reductions. They failed to tell the students

that reduced prices could be achieved only by reducing the quality of the food. In a few weeks, we may hear about a boycott because of cheap horseburgers.

At WRI, the students are eating well but they are about to lose their voices. The Tech Senate fully supported a motion to abolish itself and all the student governing bodies. The reason is a complete lack of support from not only the college officials but even the students themselves. Open meetings were tried and failed, and the officers of the Senate have become completely disenchanted in their role as student leaders. The essential question is how much control the students should have in the operation of the university's policy. Unfortunately, this problem has existed for several hundred years and WPI's Senate is encountering no new difficulty.

Oregon UFO

At the University of Oregon, a political science major reported seeing a "flying saucer." He and his girl friend were driving down the street when they were confronted with a football-like object traveling at an estimated 100 mph. Skepticism was the usual reaction to such reports in years gone by, but recently experts have hinted at the existence of UFOs. Major Keyhoe, Director of the National Investigations Committee on Aerial Phenomena, speaking at a press conference at Otterbein College, when asked if UFOs existed, replied "Oh yes, there's no doubt about it. In fact, the Air Force has admitted it secretly." After reading this, there is a possibility that the Great Dome will be cluttered with avid course XVI majors awaiting the appearance of a special UFO from the

Letters to The Tech

Shelving problems

To the Editor:

The suggestion of Edward Cutler in his letter to the Editor, The Tech, January 6, concerning the system for Science Library Reserve books will be seriously considered by the Library. The pendulum has swung twice from open shelving to closed shelving during the past decade.

The changes have always been in response to student requests. Mr. Cutler is right in his assumption that one reason for removing them this term from "freely accessible shelves" was that people walk off with or hide them. The 1966 Report of the Library Subcommittee of SCEP recommended strongly that the Science Library Reserve books be "placed behind a barrier and that an attendant should check out books for room use, as in the Reserve Book Room." So place them in closed stacks we did!

We had hoped that the fact that all of the same books are on open shelves in the Student Center Library 24 hours a day would complement having the Science Library set behind a counter. In addition the Science Librarian has been adding to the reference book

sections of the Science Library copies of titles from the reserve lists that are in very heavy demand.

Trying out the suggestion of placing books on open shelves in the Reserve Book Room would depend upon our ability to obtain proper personnel and budgeting to have a bookchecker at the door 100 hours per week, and before we try it, the reactions of other students who use these books would be helpful.

William N. Locke
Director of Libraries

TSE finances

To the Editor:

On the MIT campus student entrepreneurial activity is channeled to and controlled by Technology Student Enterprises, Inc. This organization was formed to eliminate the excesses which we saw in the promotion of charter flights in the early sixties. As I understood it, TSE was also to provide capital, guidance, a more professional atmosphere, and a financial superstructure for student entrepreneurs while protecting the interests of the MIT community.

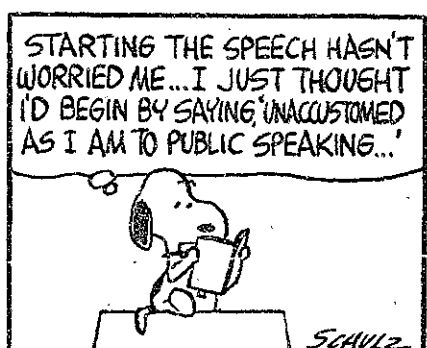
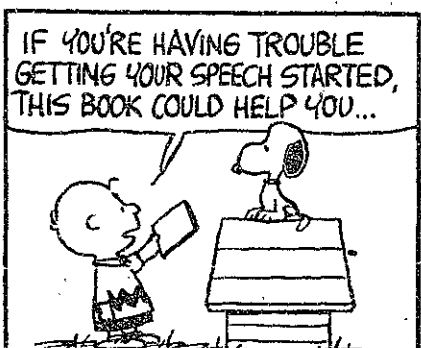
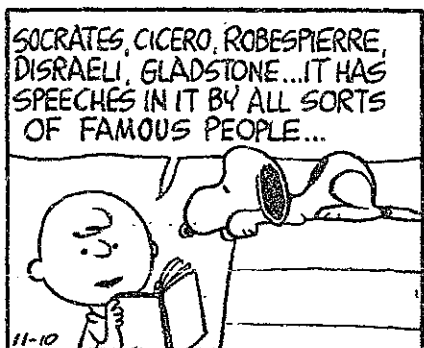
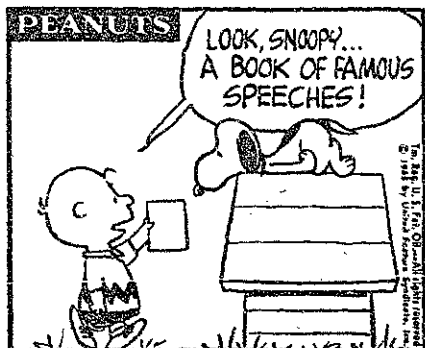
Since its founding in December, 1963, there have been a good num-

ber of outward signs of an increase in the quality and quantity of TSE services. Yet, a few issues ago in The Tech there was a statement by the TSE travel manager that the travel service had only broken even during the past year. Since the travel service seems to be the largest TSE activity I wonder how that statement reflects on the rest of the TSE organization.

To the best of my knowledge, the financial condition and activities of TSE have never been reported in The Tech or in any other MIT publication. Two other organizations that serve MIT, The Coop, and for the MIT staff The Credit Union, publish a yearly financial report. Can the MIT community expect such a document from TSE?

B. P. Strauss '64

(Ed. note: TSE is a corporation chartered by the Commonwealth of Massachusetts, and by law submits operating statements to its board of directors and its stockholders. The original stock was purchased by the Institute in the name of three stockholders, Vice-president Malcolm Kispert, Director of Student Aid Jack Frailley, and the UAP.)



Faculty research advanced Townes to receive honorary LL.D. by new microscope lab

(Continued from Page 1)

tain visual presentation of structures as small as three angstroms in diameter.

The sample preparation equipment includes a microtome that uses wedge-shaped blades to peel sample sections as thin as 100 angstroms.

The electron microscope facility will enable faculty and students to expand fundamental studies in such areas as chemical catalysts and their physical interactions with the materials used to support them, the structure and design of membranes for chemical separation, and the chemical engineering aspects of colloids.

Facility aids in membrane study

One Chemical Engineering Department group under Prof. Edward Merrill is using the facility in research on biomedical membranes. The field embraces both membrane technology and colloidal chemistry and is applicable to development of improved artificial kidney machines.

Another group including Prof. Baddour and his associates have a particular interest in industrial catalysts and in membrane technology. The microscopes are used by the thesis students in both fields.

Prof. Allan S. Douglas is using the facility for one of MIT's advanced topic-centered seminars for freshmen.

Several industries contribute

The total cost of the electron microscope facility was approximately \$150,000. Of this, \$36,000 was contributed by the NSF in the form of an equipment grant. Other funds came from several industrial concerns through grants to the department and from MIT's own resources.

These valuable instruments are in good hands. In charge of the operation of the facility and laboratory are instrument technicians Harry Greenlaw and Stanley Mitchell, both of whom have had many years of laboratory experience at MIT.

An informal dedication held recently was attended by Dean Gordon S. Brown of the School of Engineering; Prof. Edwin R. Gilliland, department head; Prof. Raymond F. Baddour, who took a leading role in organizing the facility and laboratory; Mr. Lewis G. Mayfield, engineering chemistry program director for the Engineering Division of the NSF; and other faculty and students.

Dr. Charles H. Townes, Institute Professor of Physics, has been selected to receive an honorary degree at the University of Alberta's Centennial Convocation, March 10.

Along with three Canadians, he will be presented with the degree of Doctor of Laws, honoris causa.

Dr. Townes, a world authority of microwave spectroscopy and masers, and related matters, has held Fulbright and Guggenheim Fellowships, and was awarded the Nobel Prize for Physics in 1964.

The others to be receiving honorary degrees are Mrs. Donald W. McGibbon of Toronto, His Eminence Paul-Emile Cardinal Leger

of Montreal, and Mr. C. H. Dick- a special one for the awarding of honorary degrees, and no regular degrees will be conferred.

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\$1,400,000 released for linear accelerator to be built in Middleton

One million, four hundred thousand dollars of Atomic Energy Commission (AEC) funds have been released for use on the 400 million electron volt linear accelerator to be built by MIT in Middleton, Massachusetts.

Representative William H. Bates (R-Mass.), a ranking member of the Joint Committee on Atomic Energy, made the announcement, saying that the building of the accelerator "marks another step in the scientific development of Essex County, which will attract many of the best minds and advanced industries of the nation."

Bates said that previously only \$175,000 of the \$4.6 million appropriated for the MIT accelerator had been apportioned for this fiscal year. Release of the additional money makes it possible for the project to proceed on schedule and within original estimates of cost for the \$5.4 million accelerator, he said. The balance of the federal funds, Bates added, is expected to be released after July first.

MIT is providing the land and \$800,000 of the total cost. Includes \$150,000 more for the Middleton accelerator's operating expenses.

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CAMPUS INTERVIEWS

MARCH 7, 1967

PSSC group given award

An "Appreciation Award" has been presented by the Western Electric Fund to MIT "in recognition of outstanding efforts in furthering academic excellence and significant contributions toward meeting the educational needs of a free society."

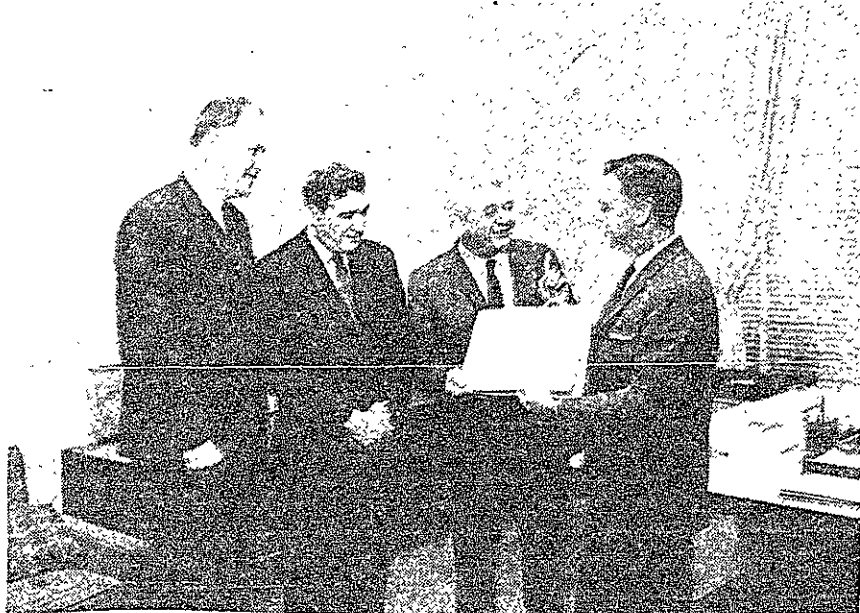
In recognition of PSSC

The award, which was accom-

panied by a \$5,000 check, was given in recognition of the work of the MIT Physical Science Study Committee, headed by Dr. Jerrold R. Zacharias, which pioneered in the development of a new high school physics course, now used throughout the world. This work led to the establishment of Educational Services Incorporated, which has been responsible for extensive curriculum reforms and which has now been incorporated into a new organization, Educational Development Center.

Award available to Zacharias

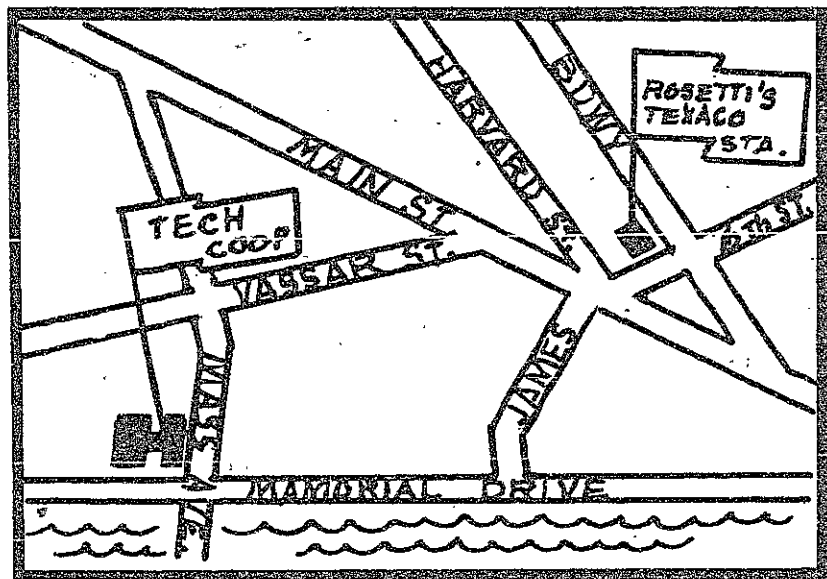
Dr. Jerome B. Wiesner, provost of MIT, announced that the monetary award will be made available to Professor Zacharias for use at his discretion for special educational purposes. Dr. Zacharias, a physicist who holds the title of Institute Professor at MIT, led in the formation of the PSSC in 1956 and became director of academic affairs of ESI when it was formed. He is vice president of EDC.



The Appreciation Award of the Western Electric Fund is presented by (right) J. W. Abbott, Jr., of Western Electric. From the left are Bruce Harriman of NET&T, Dr. Jerome B. Wiesner, and Dr. Jerrold R. Zacharias.

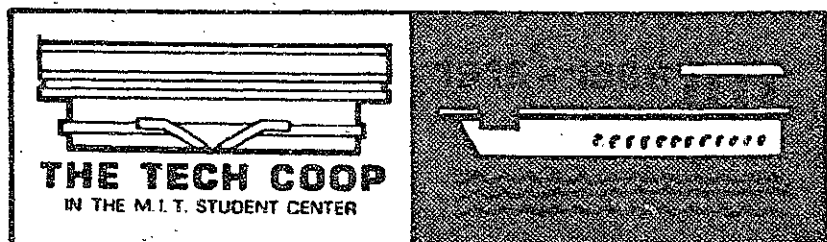
Selective Service test applications must be postmarked by Friday

Applications for the March 11 and 31 and April 8, 1967 administrations of the College Qualifications Test are now available through Mrs. Lutz, Selective Service Advisor, in 20E-226. Completed applications for the test must be postmarked by midnight, Friday, in order for the applicant to take the test. Applications should be sent to Selective Service Examining Section, Educational Testing Service, Box 988, Princeton, New Jersey 08540. The April exam will not be offered at MIT, so students wishing to take the test then should choose another test site.

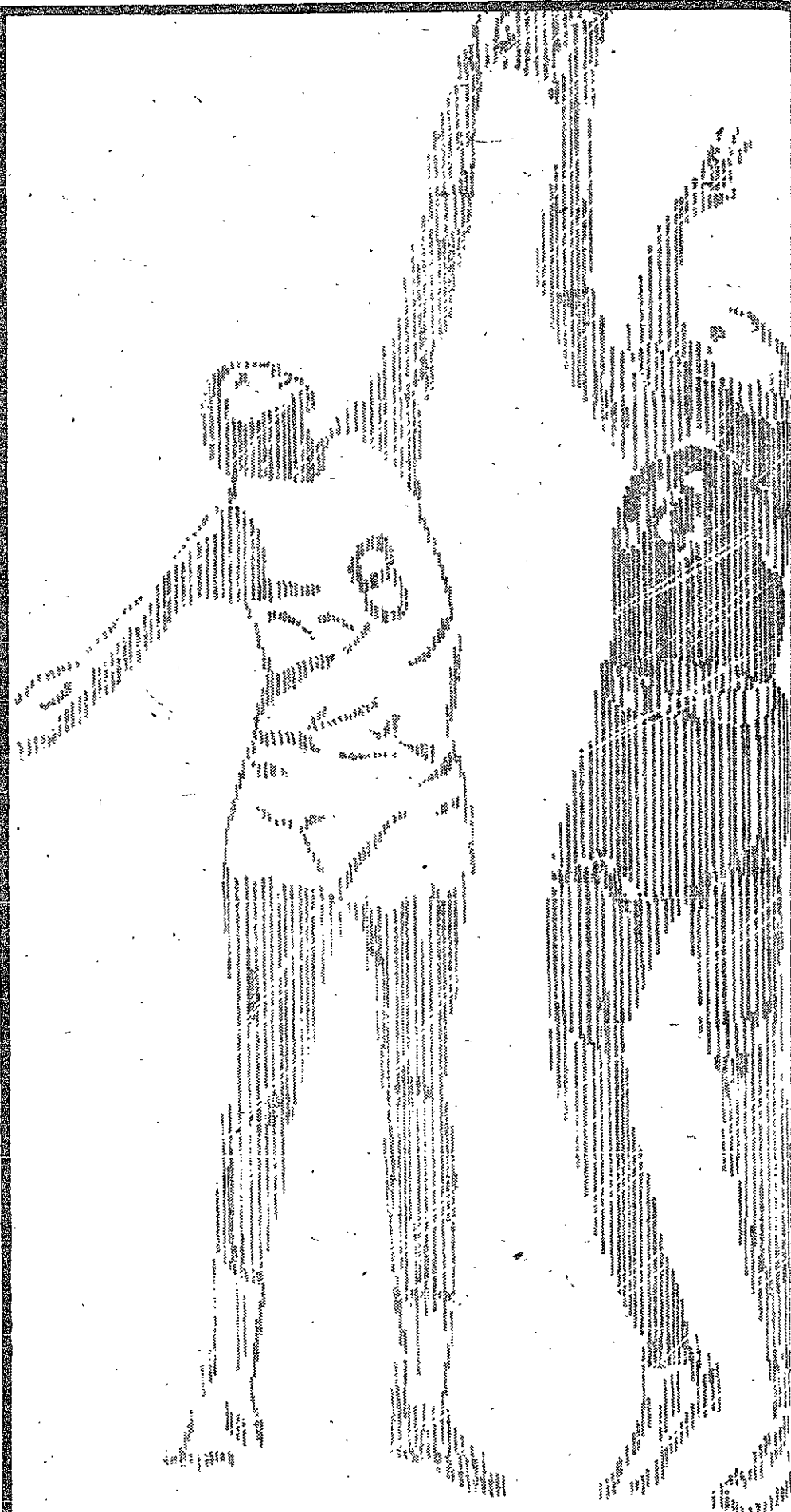


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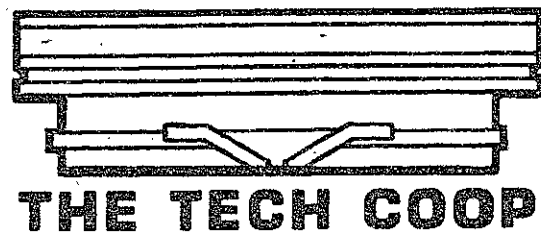
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Book review... Nazi cruelty scars child

The Painted Bird, by Jerzy Kosinski, follows the sufferings of a small boy in wartime Poland. The novel has been praised as a study of Nazism in the abstract.

By Thomas Nesbitt

I hesitate to say that this book will shock you, for the fear of appearing trite or even insincere, but there is no other word. 'The Painted Bird' relates many scenes which, were they in any less real a context, you could label 'gross' and forget. Unfortunately, no such easy escape exists.

Kosinski maintains complete realism, even while treating a highly emotional subject, by his perfectly objective narration. He chooses to tell his story in the naive mind of a six-year-old child who was separated from his parents at the outbreak of World War II. The boy wandered from village to village seeking food and shelter, but because of his dark hair, black eyes, and strange urban accent, he was taken for a Gypsy or Jew by the simple peasants.

(Please turn to Page 15)

Richard Wright named Manager of Tech Review

Richard F. Wright has been named advertising manager of Technology Review, according to Donald P. Severance, publisher. Wright has been ad manager of the magazine on a part-time basis for the past year. Formerly, he was advertising director of New Englander and had also served in the national advertising department of the Boston Post.

Jacoby appointed director of Institutional Studies Dept

Dean L. Jacoby has been appointed director of the Office of Institutional Studies at MIT, Malcolm G. Kispert, Vice President of Academic Administration, announced.

The Office of Institutional Studies was established in 1964 to provide computer services to the Registrar's Office. It now provides this service to a number of administrative offices at the Institute including Admissions, Alumni, and Student Aid.

Mr. Jacoby came to MIT in 1964 as assistant director of the Student Aid Center and general manager of Technology Student Enterprises, Inc. He became associate director of Student Aid in 1965.

He graduated from MIT in 1964, receiving a bachelor of science degree in industrial management. As a student, he was president of the Undergraduate Association. Mr. Jacoby served as class president for five years following graduation, and has been class agent since 1959. From 1961 to 1963 he served on the Corporation Visiting Committee for Student Affairs. From 1954 to 1957 he served with the Air Force as chief of Air Force Contracts Administration & Termination and as acting deputy chief of the Contracts Division of

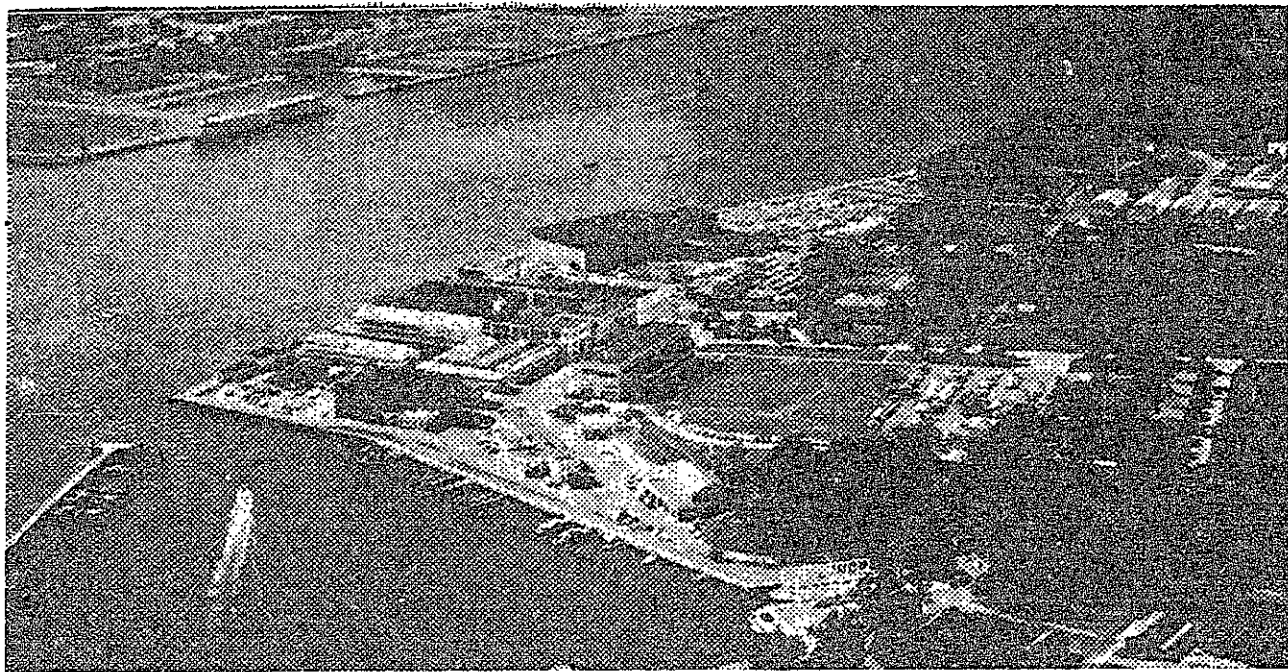
the Office of the Air Force Representatives at the Douglas Aircraft Company. From 1958 to 1961 he was a senior consultant with Payne-Ross Ltd., Managerial Consultants in Canada, and from 1961 to 1964 he was manager of development and a partner of C. J. Jacoby and Company.

Soviet scientist Fomin to lecture Thursday on models of systems

Professor S. V. Fomin, a visiting Soviet Exchange Scientist, will lecture on Mathematical Models of Propagation of Excitation in Biological Systems Thursday at 2:30 pm in Room 6-120.

Professor Fomin is a member of the Department of Mathematics at Moscow University and the head of the Mathematics Laboratory of the Institute of Biophysics, USSR Academy of Sciences. He is in the US for a three-month exchange visit under the provisions of the Inter-Academy Exchange Agreement between the National Academy of Sciences and the Soviet Academy of Sciences.

The lecture is one of a series sponsored by the Committee on Engineering and Living Systems.



On the waterfront at Annapolis -

growth opportunities for research engineers and scientists

The U. S. Navy Marine Engineering Laboratory conducts RDT&E in naval shipboard and submarine machinery and auxiliary systems (electrical, propulsion, control, etc.). In addition to developing basic improvements in performance and reliability, the Laboratory concentrates on ship silencing, new concepts in energy conversion and control, ways to minimize friction and wear, special operating machinery for deep-diving vessels; and tough, resistant naval alloys to meet all ocean environmental conditions.

The Laboratory buildings—now more than 50 of them—house some of the finest research, experimental and evaluation equipments of their kind, such as high-speed computers, electric power generators, vibration and shock test stands, metals composition analysis instruments, cryogenic storage and handling facilities, physics and chemistry labs, and complex instrumentation for measuring strain, stress, pressure, acceleration, velocity, performance, and reliability. The Laboratory grounds resemble a modern industrial park, and include special facilities for in-field experimentation.

And the locale is ideal. Washington, Baltimore and the ocean resorts are no more than one hour's drive. Annapolis itself is the state capital, and offers small-city living with metropolitan accessibility.

Urgent new projects require additional engineering and scientific personnel with BS, MS, and PhD degrees.

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Electronic Engineers—Research and development in electronics—servo-mechanisms—electromechanical devices—instrument and panel illumination—pressure measurement—fluid flow measurement.

Chemical Engineers—Research and development work in chemical and electro-chemical processes; gas and fluid flow systems and equipment; air and water treatment systems; semi-conductor materials; lubrication; fuel systems and processes; filtration; hydraulic fuel systems.

Physicists—Application of physical principles to the areas of sound, electronics, optics, mechanics, instrumentation, or electricity and magnetism.

Chemists—Engaged in application of chemical principles to the areas of water treatment and purification, corrosion and deposition in naval equipment, atmosphere purification, thermoelectric materials, fuel cell power generation, lubrication, fuels, hydraulic fluids, and instrumental analysis.

Mathematicians—Apply the techniques of mathematics to the solution of scientific and engineering problems in the support of research and development programs of the laboratory. Analyze physical problems and formulas suitable for numerical analysis and computation. Program for solution by digital computer when appropriate.

Metallurgists—Research and development work in the area of new or improved alloys for ship hull and machinery applications involving considerations of physical and mechanical properties of metals and alloys, fatigue and corrosion characteristics, and weldability.

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February 13

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- Air and Missile Defense Systems
- System Design
- Systems Analysis
- Air Traffic Systems
- Tactical Systems
- Strategic Systems
- Range Instrumentation
- Information Sciences
- Computer & Display Technology
- Communications
- Electronic Warfare
- Radar Design and Technology
- Information Processing
- Surveillance and Warning Systems
- Applied Mathematics

Technical representatives of The MITRE Corporation will be conducting interviews on campus February 20, 1967

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Hayden Gallery to exhibit Trova's "Falling Men"

Jean Anouilh's 'Rehearsal' plays two weeks in Kresge

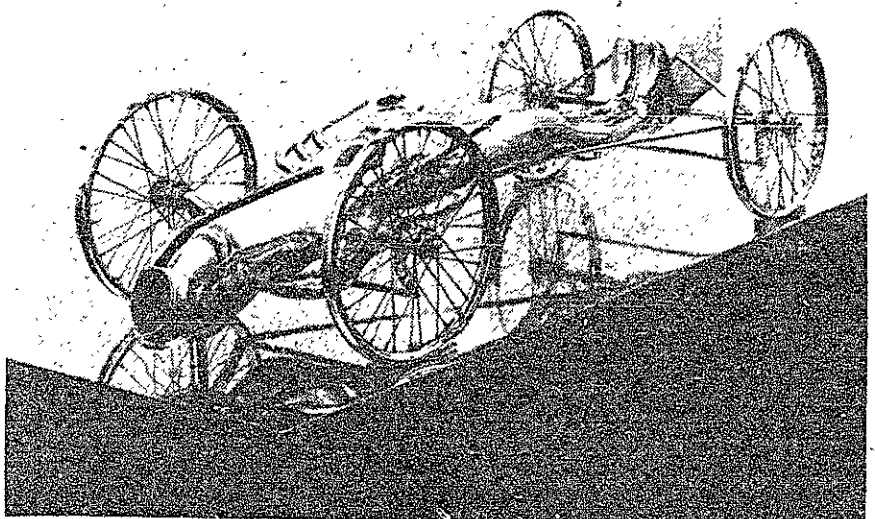
THE TECH

TUESDAY, FEBRUARY 7, 1967

Page 9

By Steve Carhardt
'Falling Men' will invade the Hayden Gallery beginning February 20. The occasion will be a one-man show featuring their creator, the noted contemporary artist Ernest Trova. The Falling Man' series of figures is considered by many to be one of the more significant aspects of modern sculpture.

The exhibition will be sponsored by the MIT Committee on the Visual Arts, and will be held in the Hayden Gallery. The grand opening of the show, at which refreshments will be served, will be from 7 to 9 pm, February 20. Thereafter the new hours at Hayden will be in effect: 10 am to 9 pm Tuesdays, 10 am to 5 pm other weekdays, and 1 to 5 pm Saturdays and Sundays. Most of the pieces which will be shown have not yet been exhibited in Boston.



Study: Falling Man (Carman) is one of the works of sculpture which form the Exhibition of Recent Sculpture by Ernest Trova to be displayed in the Hayden Library from February 20 to March 19. This particular sculpture is of polished silicone bronze and enamel, 72"x28"x20". It is part of the collection of Mr. and Mrs. Frederick Wiesman. The exhibition is being sponsored by the MIT Committee on the Visual Arts.

Emergence of Trova
In his early years, Trova was an expressionist painter and was strongly influenced by the works of de Kooning. Expressionism led naturally to collages, which came to involve attached pieces of junk or cloth. From there it was but a short step to sculpture.
'Falling Men come in a variety of disguises, but they all have a great deal in common. They are all made of antiseptic polished metal or plastic. They are neither men nor woman, but rather a strange sort of armless, pot-bellied automatons. What message they might have for us is something each viewer must decide for himself.



The MIT Dramashop continues its series of productions with the play, 'The Rehearsal' by Jean Anouilh. The play was presented during the last two weeks before vacation.

First program Tuesday

Engineering-living systems topic for Spring Seminars

Although the applications of engineering disciplines in medicine have been rapidly multiplying,

the large volume of work being done in this field at MIT has gone for the most part unnoticed due to the fact that it is spread among many departments. In order to publicize these activities among the student body and encourage students interested in working in this field, the Spring Seminar Series on Engineering and Living Systems will be sponsored by the MIT Committee on Engineering and Living Systems.

First Program To Be Survey

The first seminar will be held Tuesday, February 14, at 4 p.m. in the Bush Room, 10-105. The speakers will be the Chairman of the Committee on Engineering and Living Systems, Professor Murray Eden, and the committee's executive officer, Dr. Philip A. Drinker. The program will be a broad survey of the many biological engineering research projects currently in progress at MIT.

Although the schedule of future seminars has not yet been fully determined, upcoming speakers will be primarily MIT faculty who will describe their own projects in some detail. Among the projects which may be discussed are the development of an artificial arm with feedback capabilities not unlike those of the nervous system and the improvement of heart-lung machines.

Functions of Committee

The sponsoring Committee on Engineering and Living Systems was formed two years ago to act as the focus for all engineering-medical research at MIT since these endeavors have no natural "home" among MIT's departments. The committee has a two-fold purpose: to encourage contact between researchers in this field and supervise the development of educational programs for students planning to work in this area.

Gemini 12 film to be shown Fri. by Tech Review

Technology Review will present a 20-minute NASA motion picture of the flight of Gemini 12, including the "space walk" of Edwin ("Buzz") Aldrin '63, in Kresge Auditorium Friday. There will be continuous showings from noon until 2 p.m. with commentary by Peter Gwynne, Acting Managing Editor of the Review.

The flight of Gemini 12 will be highlighted in the February issue of Technology Review.

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19	20					

8:30 pm; 50c (Mondays), \$1.25 (weekends).
MISCELLANEOUS
 Gropper Art Gallery — Exhibition and sale of Honore Daumier's lithographs; starts Feb. 11.

THIS WEEK
MUSIC
 Boston Symphony Orchestra—Colin Davis, guest conductor; Berlioz' Overture, "King Lear," Op. 4; Stravinsky's "Symphony in Three Movements," Dvorak's "Symphony No. 7," in D minor, Op. 70; Feb. 7, 8, 8:30 pm; Symphony Hall.
 Boston Symphony Orchestra—Erich Leinsdorf, conducting; Prokofiev's "Scenes from 'Romeo and Juliet,'" Op. 64; Rachmaninoff's "Piano Concerto No. 2," in C minor, Op. 18; Gina Bachauer, soloist; Feb. 10, 2 pm, Feb. 11, 8:30 pm; Symphony Hall.
 Cantata Singers—Leo Collins, director, Marsha Vleck, Jane Struss, Karl Dan Sorensen, and Francis Hester, soloists; "Ich bin ein guter Hirt," "Ihr Menschen ruhmst Gottes Liebe," "Der Herr denket an uns," "Komm, Jesu, Komm"; Feb. 11, 8:30 pm; Sanders Theatre; \$2, \$3.50.
 Folklore Productions—Tom Paxton concert; Feb. 11, 8:30 pm; Jordan Hall.
 Handel and Haydn Society—Dr. Edward F. Gilday conducts a performance of Randall Thompson's "The Passion, According to St. Luke"; Feb. 12, 8 pm; War Memorial Auditorium.
 MIT—New York Chamber Soloists; Rameau's Cantata "Diane et Acteon," Bach's Cantata No. 189, "Meine Seele ruhmst und preist," Couperin's "Concerto Royale No. 4," Boismortier's "Concerto in E Major," and Telemann's "Cantata No. 31"; Feb. 12, 3 pm; Kresge Auditorium.
 Radcliffe—Radcliffe Freshman Chorus and the Amherst Freshman Glee Club present a concert featuring Mozart's "Coronation Mass"; Feb. 10, 8:15 pm; Holmes Hall; free.
THEATRE
 People's Theatre—James Baldwin's "Blues for Mr. Charlie," sponsored by St. Cyprian's Episcopal Church and Boston CORE; Feb. 10, 11, 12, 8 pm; St. Cyprian's Episcopal Church Parish Hall; \$2 (students \$1.50).
 Rose Coffee House—Tempo Theatre presents "The Last Word" and "The Balloon"; Feb. 10, 11, 12, 25, 26,

NEXT WEEK
MUSIC
 Boston Symphony Orchestra — E. Power Biggs joins Boston Symphony Orchestra in organ concert; Feb. 19, 8:30 pm; concerti and sonatas for organ and small orchestra by Bach, Haydn, Mozart, Poulenc, and Vivaldi; Feb. 19, 8:30 pm; Symphony Hall.
THEATRE
 Rose Coffee House — The Brattle House Players present Bernard Shaw's "Great Catherine"; Feb. 17, 18, 19, 8 pm; 50c (Mondays), \$1.25 (weekends).

Baroque music concert scheduled for Sunday

Baroque music by Telemann, J. S. Bach, and the French composers Rameau, Boismortier, and Couperin will be performed by the New York Chamber Soloists at a concert in Kresge Auditorium Sunday at 3 p.m.
 Distinguished tenor Charles Bressler will sing the recitative in Rameau's Cantata "Diane et Acteon" joining soloists Gerald Tarack, violin; Alexander Kougell, cello, and Albert Fuller, harpsichord. Mr. Bressler will also perform in J. S. Bach's Cantata No. 189, "Meine Seele ruhmst und preist."
 Couperin's Concerto Royale No. 4, Boismortier's Concerto in E Major and the Cantata No. 31 by Telemann are also included in the program.

Next week, explore engineering opportunities as big as today's brand new ocean

Talk with on-campus Career Consultant from Newport News — world's largest shipbuilding company — involved with nuclear propulsion, aircraft carrier design, submarine building, oceanographic development, marine automation, all the challenging advances on today's brand new ocean. The New York TIMES calls this "the last earthbound frontier" with "profit possibilities as big as the sea."

Learn what our half-a-billion-dollar order backlog means to you in terms of high starting salary and years of career security with no lid on your future. With orders up \$80,000,000 in five months, our need is urgent for imaginative men in all the disciplines listed here. Men who like tough challenges and individual responsibility.

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Mr. Lynn A. Schwartzkopf
 Our Career Consultant,
 will be at the Placement Office on Tuesday, February 14, to answer questions, talk over qualifications, take applications for fast action.

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movie ...

Czech film depicts problems of youth

The Loves of a Blonde. At the Cinema Kenmore Square. Directed by Milos Forman. Starring Hana Brejchova as Andula and Vladimir Pucholt as Mila.

By David Grosz
 "The Loves of a Blonde" can do nothing but strengthen the already increasing popularity of Czechoslovakian films in this country. It is every bit as well done as "The Shop on Main Street," and being a comedy and about young people and love, it is bound to be more popular.

Adolescent problems
 Milos Forman, the director of "The Loves of a Blonde," claims that he understands the world of teenagers better than that of his contemporaries: "I like them, understand them, know them, and, if you like, I am biased in their favor..." In any case, he shows himself clearly capable of making a beautifully poignant and often amusing statement about the peculiar emotional problems of young people growing up in modern-day Czechoslovakia.

Scarcity of men
 The blonde of the title, Andula (played by Hana Brejchova), works in a shoe factory in a small isolated town where there are not



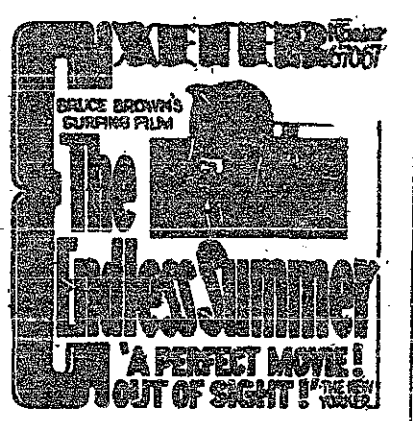
Hana Brejchova confides intimate secrets to her girl friend in this scene from Milos Forman's "Loves of a Blonde." The Cinema Kenmore Square presented this Czechoslovakian film.

nearly enough men for the several thousand young girls in the factory. The frustration of these girls' lives comes across well in the camera work and in a whole series of really fine performances in minor parts. The director of the factory, in particular, is memorable for his smiling, constant concern for his charges, which never seems to reach them.
Andula's romance
 But simple frustration is just a minor element. While Andula's girl friends are subjected to the attentions of a group of middle-aged enlisted men at a dance, she has her eye on the pianist in the band (played by Vladimir Pucholt). The main story is about her "romance" with the pianist, representative of the wild world of Prague, which, in a way, turns out to be every bit as frustrating as her own.
 The pianist coaxes her up his room, where the love scene that follows combines elements of humor and sympathy in a memorable sequence. Andula is far more than the simple rural girl whose innocence lets her be fooled by the slick band member. Somehow they are both conspirators; she slightly unwilling, in a plot to outwit their stifling environment.

Confused parents
 But when he casually invites her to Prague, she takes him seriously, confronting his parents at their door one night, suitcase in hand. This confrontation with the parents (who understand neither her nor their son, Mila) and, later, with Mila, and the night that follows, provide Andula a sometimes bitter but often hilarious initiation to the reality of what the loves of a blonde are likely to be.

Disillusioned return
 She returns to the factory, a little disillusioned, but still with hope for the future. As she stands at her job painting shoes, she has no need for the attentions of the factory director, who almost seems more lecherous than sympathetic.

Forman's understanding of the teenager's problems embrace some that are universal and some that are peculiar to the planned economy of socialism. The planners in conference express their concern for the lives they manipulate, but their concern gets lost in the bureaucracy. One may feel that Andula achieves a sort of personal solution; but one must wonder what solace can comfort some thousands of her less fortunate fellow workers.



The MIT GILBERT and SULLIVAN SOCIETY
 announces
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 10 a.m. 1 p.m., Kresge Auditorium rehearsal room A. Audition with prepared material.
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 Dan Briotta, X3161 or dial 8-320.

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CAMPUS INTERVIEWS
February 9, 1967

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"THE NIGHT OF THE IGUANA"
 3:45 and 7:45
 Garbo/Marx Bros. Series
 starts Wednesday

BRATTLE SQ. TR 6-4223
 Tuesday-Wednesday
"The Lord of the Flies"
 5:30, 7:30, 9:30
"HELP"
 starts Thursday

Talking Rock

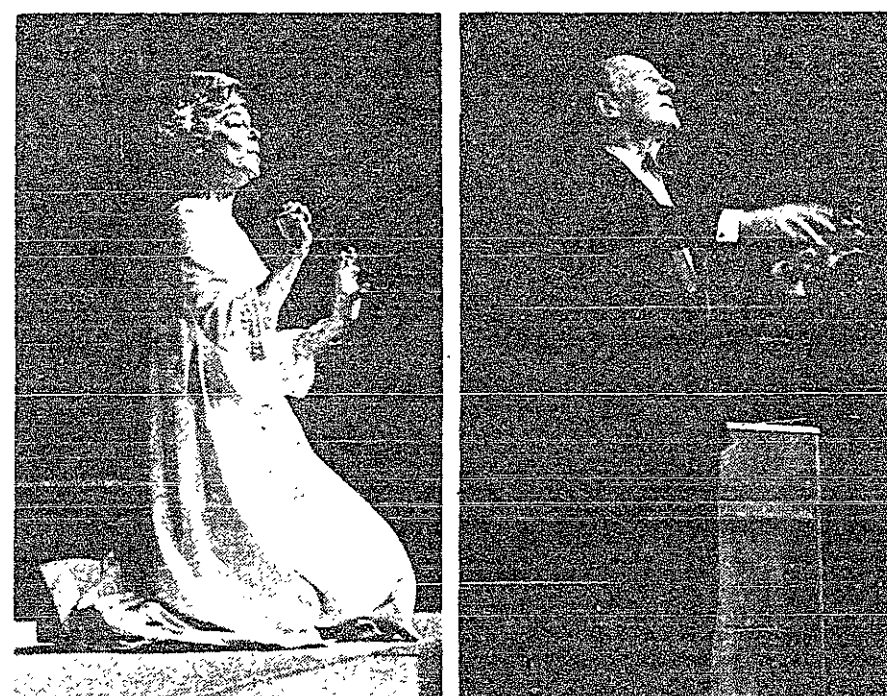
By Don Davis

The top thirty artists and top forty songs of 1966 as chosen in our poll are listed below.

1) Beatles	394	25) Kinks	19
2) Mamas and Papas	390	26) Cyrkle	18
3) Rolling Stones	256	27) Wilson Pickett	15
4) Simon and Garfunkel	219	28) Sandpipers	15
5) Lovin' Spoonful	183	29) Four Seasons	14
6) Beach Boys	170	30) Mothers of Invention	14
7) Supremes	113		
8) Association	89	Top songs	
9) Bob Dylan	65	1) California Dreamin'	238
10) Monkees	62	2) Cherish	195
11) Donovan	57	3) Monday Monday	177
12) Four Tops	53	4) Summer in the City	126
13) Paul Revere and Raiders	48	5) Eleanor Rigby	124
14) Animals	40	6) Good Vibrations	121
15) Temptations	33	7) Paint it, Black	95
16) Tijuana Brass	30	8) I Am a Rock	85
17) Petula Clark	29	9) Along Comes Mary	79
18) Byrds	27	10) Did You Ever Have To Make Up Your Mind	78
19) Blues Project	26	11) Gloria	74
20) Jefferson Airplane	25	12) Kicks	71
21) Righteous Brothers	23	13) Homeward Bound	70
22) Frank Sinatra	22	14) Urge for Going	70
23) Mitch Ryder	20	15) Sloop John B.	69
24) James Brown	20	16) Eight Miles High	64
		17) You Can't Hurry Love	62
		18) Devil with a Blue Dress On	60
		& Good Golly Miss Molly	60


(Please turn so Page 13)

John Gielgud, Irene Worth give Shakespearean recital



Sir John Gielgud, the noted British actor, and Miss Irene Worth, as seen in their performance, 'Men and Women of Shakespeare,' presented in Kresge Auditorium January 17.

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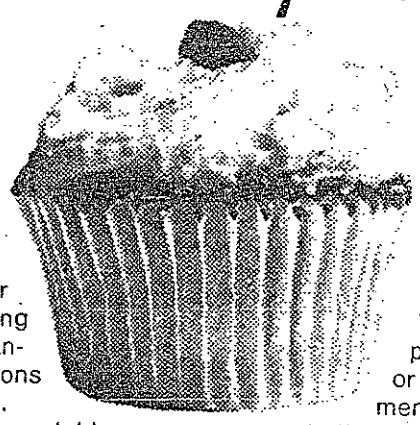
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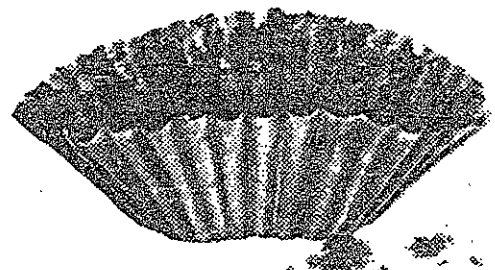
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wants to be right in the thick of things... who doesn't think it's old hat to work your way to the top. We cordially invite you to find your place in the Sun, in a permanent or summer position. Visit your placement office now to schedule an appointment with our representative on campus. If you can't meet us on campus, we'll send you employment information. Just drop a note to: Personnel & College Relations, Dept. H, Sun Oil Co., 1608 Walnut St., Phila., Pa. 19103. **Sun Oil Company**
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and eat it, too.



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IS BUSINESS STRUCTURED FOR RECOGNITION OF INDIVIDUAL MERIT?

(or How To Succeed Quickly in Business by Shuffling Letters.)



Robert W. Galvin



James Hill

Dear Mr. Hill:

The fundamental concern expressed in the headline above has been voiced in one way or another by all six students taking part in our current exchange of views on business. Because it is an issue of such common concern, I am going to respond in the same manner to each of you.

We would agree, I believe, that there are instances in which seniority, prejudice in some form, nepotism, or personal chemistry have been influential to an unjustifiable degree in advancing or hindering careers in business, in government, in education. This shows human frailty; it is neither unique nor dominant in business. We must combat this for the general improvement of society and we will be assisted in our task by the fact that inadequacy in any position of leadership tends to catch up with its owner.

Meanwhile, the great burden of evidence supports a conviction that **business is structured for the recognition of individual merit.**

There are thousands of executives in American business today who made their mark before they were 50. Many before 40. I want to tell you about one of these men, not because I seek to generalize on one specific but because the individual merit which has been demonstrated in his career broadly characterizes American business leadership.

This man's career might be entitled "How To Succeed Quickly in Business by Shuffling Letters." It is not a tale of a young genius who invented a new product and zoomed to the high tax brackets overnight. There are true stories like that, but they don't speak directly to your questions.

No, this story starts with an 18-year-old student of humble circumstances at the University of Chicago who had an ordinary summer job at a camera company. His job wasn't too different from the sort of summer job which many college students would describe as dull and boring, fragmented and inconclusive. He worked in the company's service department. He answered complaint letters.

It was a small department (there weren't too many complaints) and the college student spent about two weeks doing exactly what he was paid to do: read letters, find the problem, write answers which gave the solution. This is the way the job had always been done, no matter who sat at that particular desk. Gradually, however, this particular answer-writer (his name was Charles H. Percy—the company was Bell & Howell) began to see patterns emerging in the customers' letters. With few exceptions, he realized, each letter fell into one of perhaps nine categories.

Percy took a bundle of letters home that weekend, sorted them out on the floor, and began to compose a group of specific, carefully thought-out letters of reply. He checked and rechecked each letter against each proposed answer letter and against all the other answer letters. He found that, sure enough, he now had created a series of answers which gave full and courteous reply to almost every customer letter in the bundle.

On Monday morning, Percy checked the morning mail against his new letters and, when they, too, checked out, he took the whole bundle into the service department manager's office.

The service manager heard Percy out, checked the letters in the bundle, and agreed: a secretary could sort incoming complaints by category, type the answers, and forward a copy for further action where needed. The manager also agreed that Percy had knowingly eliminated his own job.

This intrigued Percy's boss (jobs were scarcer than they are today) and he told Bell & Howell President Joseph H. McNabb about "this enterprising kid down there who has worked himself out of a job." Mr. McNabb said, "That's a young man we should keep an eye on."

Chuck Percy went to work full-time for Bell & Howell after he graduated in 1941. He was elected president and chief executive officer at 29. The company's sales increased twelvefold under his leadership. Today, at 47, he is a newly elected United States senator. Counting his summer jobs, he worked for Bell & Howell for 28 years.

I do not contend that every college student can duplicate the Percy story in whatever career he chooses. I do submit, however, that your own version of this story will start when you start to apply your individual creativity to your first job the way he did to his.

Answering complaint letters can be a routine job for a routine sort of fellow. Come at the job with creativity, however, and you can lift it from the humdrum. You can even eliminate the job—and there aren't many more forceful ways to show that you are ready for a bigger job than to eliminate your present one.

Note also that here was a man who achieved job fulfillment, recognition, security, advancement, individuality, a chance for creativity—all the things today's college students want from their working lives—and he achieved them all **within the business structure.**

Society itself has a structure. All elements within society have structures. These structures generally work for the good of the individual, not for his harm—and the degree to which this is so depends in the final measure largely upon the individual.

Chuck Percy did not wait for chance recognition—he earned his early recognition by his own creative vision, imagination, and action.

The fastest route to a job of major responsibility is to improve the handling of a job of lesser responsibility.

**This two-way conversation
is open to you**

Have you questions or opinions about business as a possible career or as a force in society? Have your reactions (pro or con) to this series of open letters between Jim Hill, a student at Harvard, and Robert W. Galvin, chairman of Motorola Inc.? Letters like this one have appeared regularly in 29 student newspapers throughout the country since October. You are invited to make your feelings known, too. Write Mr. Galvin at 9401 West Grand Avenue, Franklin Park, Illinois 60131.

Study of solutions still an enigma to scientists

Dr. John B. Clark, post-doctoral fellow at MIT's Department of Biology delivered the first in a series of lectures to be presented at the Graduate School, Division of Biophysics, at Ohio State University. Dr. Clark's lecture was entitled "How Large Molecules Go Into Solution," and showed the complexity of analyzing even the most simple water solution.

"We don't understand just what water does in a solution," Clark said. "But it is a fact that one of the big problems in studying

large molecules is the technological limitations imposed by water in solutions." He is currently studying the way in which macromolecules found in biological systems change their structure when in contact with various solvents.

In order to study macromolecules insolvents, an ultra-centrifuge was employed. An ultra-centrifuge can produce a force of up to 300,000 times the force of gravity, and when a solvent is subjected to this, its components separate, making it easier to analyze.

Popular music poll

Votes unaffected by sales

(Continued from Page 11)

- 19) Sunshine Superman
- 20) Elusive Butterfly
- 21) Walk Away Renee
- 22) Good Lovin'
- 23) Soul and Inspiration
- 24) Reach Out, I'll Be There
- 25) Zorba the Greek
- 26) Red Rubber Ball
- 27) I Saw Her Again
- 28) Wild Thing
- 29) Born Free
- 30) Time Won't Let Me
- 31) Younger Girl
- 32) Gauntanamera
- 33) 95 Tears
- 34) Nineteenth Nervous Breakdown
- 35) Nowhere Man
- 36) Bus Stop
- 37) Yellow Submarine
- 38) Dirty Water
- 39) Mellow Yellow
- 40) Paperback Writer

1159 ballots cast

The figures after the names of

the songs and artists are the total number of ballots on which they were mentioned. 1159 ballots were marked with three songs from 1966, while 1026 contained the names of three artists. 'Younger Girl' was not among the eighty listed songs on the ballot the first day; its votes the last four days are factored up proportionately to account for this.

The voters seemed unimpressed by sales records for songs, as seven of the sixteen records which sold over one million copies failed to make the top forty. These were

(in order of finish in the poll) 'These Boots are made for Walk-in,' 'Sunny,' 'Strangers in the Night,' 'Last Train to Clarksville,' 'Winchester Cathedral,' 'Lil Red Riding Hood,' and 'The Ballad of the Green Berets.' Instead, the emphasis in the poll seemed to be on quality with a great folk music influence. Rhythm and blues performed poorly, as it did last year, with 'You Can't Hurry Love' (17) and 'Reach Out' (24) the only Negro songs to make the top forty; they made the top ten almost everywhere else.

Convincing lead

The 43 vote lead of 'California Dreamin' was convincing but not so much as the 87 vote which 'Satisfaction' polled in 1965. 'California Dreamin' could only poll 20% of the vote as compared to 27% for the Rolling Stones' big hit of 1965. Recent songs such as 'Devil with a Blue Dress On' and 'Born Free' probably performed better than they would have if the poll were conducted six months hence.

The most exciting part of the poll was the close race between the Beatles and the Mamas and the Papas, the former finally edging out a four vote victory. The strong showing made by underground groups such as the Blues Project and Jefferson Airplane, although they have had virtually no Boston airplay, was significant. A similar poll conducted by WBZ listed the top three artists as the Beatles, Stones, and Monkees.

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If, for some reason, you aren't able to arrange an interview, drop us a line. Write to: Manager of College Recruiting, IBM Corporation, 590 Madison Avenue, New York, N. Y. 10022. IBM is an Equal Opportunity Employer.

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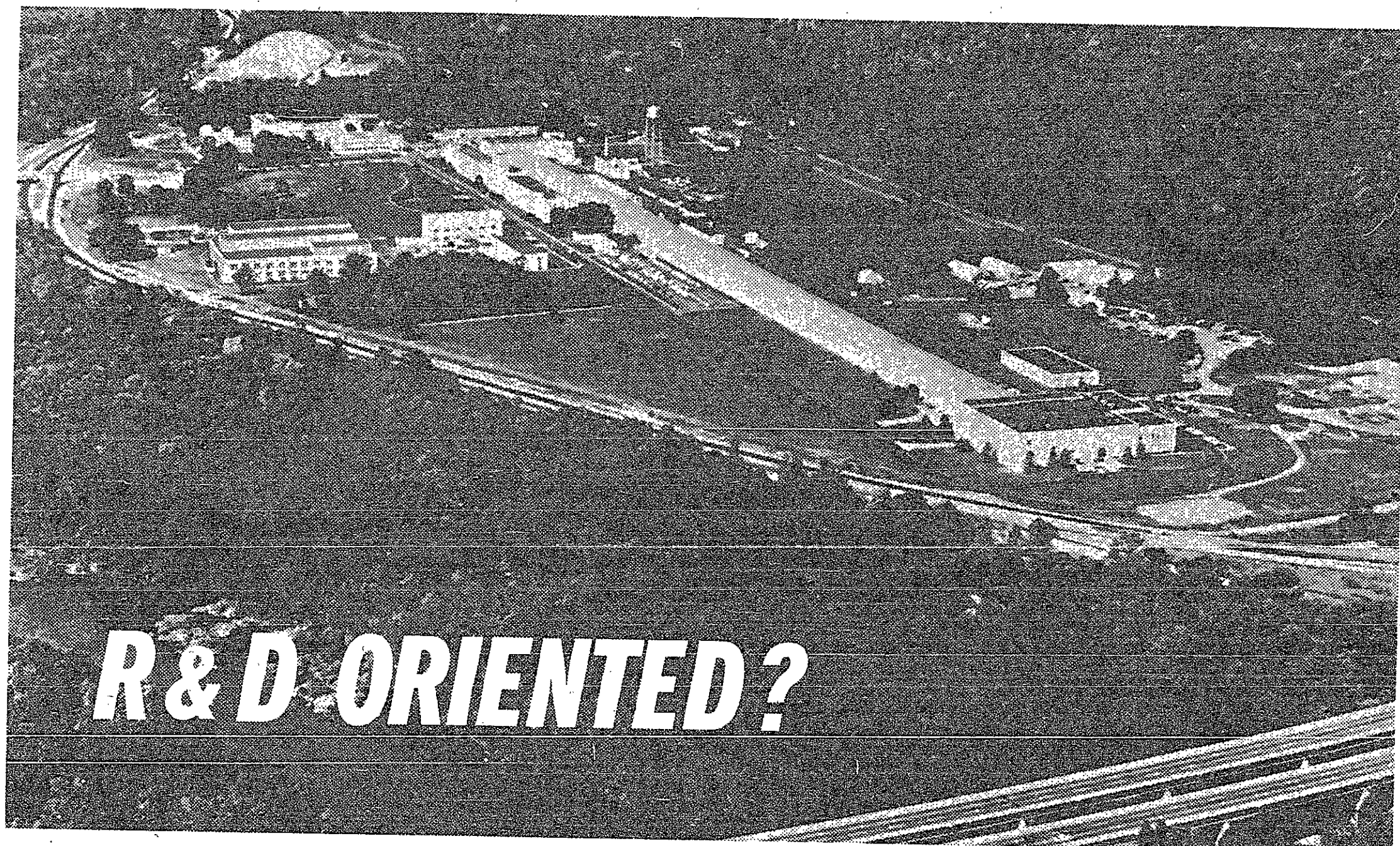
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Structural Mechanics—Surface ship and submarine structures, underwater explosions research, ship and personnel protection, hydrofoil craft.

Applied Mathematics—Computer-aided ship design, management data analysis, information retrieval systems, numerical techniques, fluid flow analysis, computer systems science and technology.

Acoustics and Vibration—Radiated, near-field, self, and hydrodynamic noise, noise transmission, countermeasures, silencing devices, signal processing, sonar systems.

Ship Concepts Research—Programs such as those under way for Surface Effect Ships and Hydrofoil Development, which combine investigations of the above fields from advanced concepts for new vehicle systems to engineering development for the Navy of the future.

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■ Excellent on-the-job training, plus opportunities for further professional development, with financial assistance for after-hours or full-time advanced study on full salary.

■ Advancement based on achievement—you can pass the \$12,500 mark in 3½ years.

■ As a career Civil Service employee you enjoy generous vacations and sick leave, inexpensive life and health insurance, and an unusually liberal retirement.

■ Washington, D.C., is a center for scientific research, and of unusual cultural and recreational opportunities.

■ Excellent living conditions.

■ Excellent public schools and colleges are located in the Washington, D.C., area.

The Model Basin is about 12 miles northwest of Washington, just off the Capital Beltway, Route 495, at Exit 15.

For more information about the Model Basin and the opportunities it offers, see the interviewer who visits your campus or write directly to Mr. S. Di Maria, Professional Recruitment Officer.

CAMPUS INTERVIEWS

February 8



DAVID TAYLOR MODEL BASIN

Dept. C21 CR, U.S. Department of the Navy, Washington, D.C. 20007 An Equal Opportunity Employer

Tortured child becomes accustomed to cruelty

(Continued from Page 7) ants and was subjected to endless tortures. In 'The Painted Bird,' the author lets us watch this young mind as it begins to form its first conclusions about the world.

"Crying did not help," the boy remarks in the first chapter in the strangely detached tone which the reader comes to expect—for the child considers his torturers' cruelty to be normal human behavior. Eventually he learns to

defend himself, but many years of suffering force him to conclude, "Man carries himself in his own private war, which he has to wage, win or lose, himself . . ."

Alone and expendable

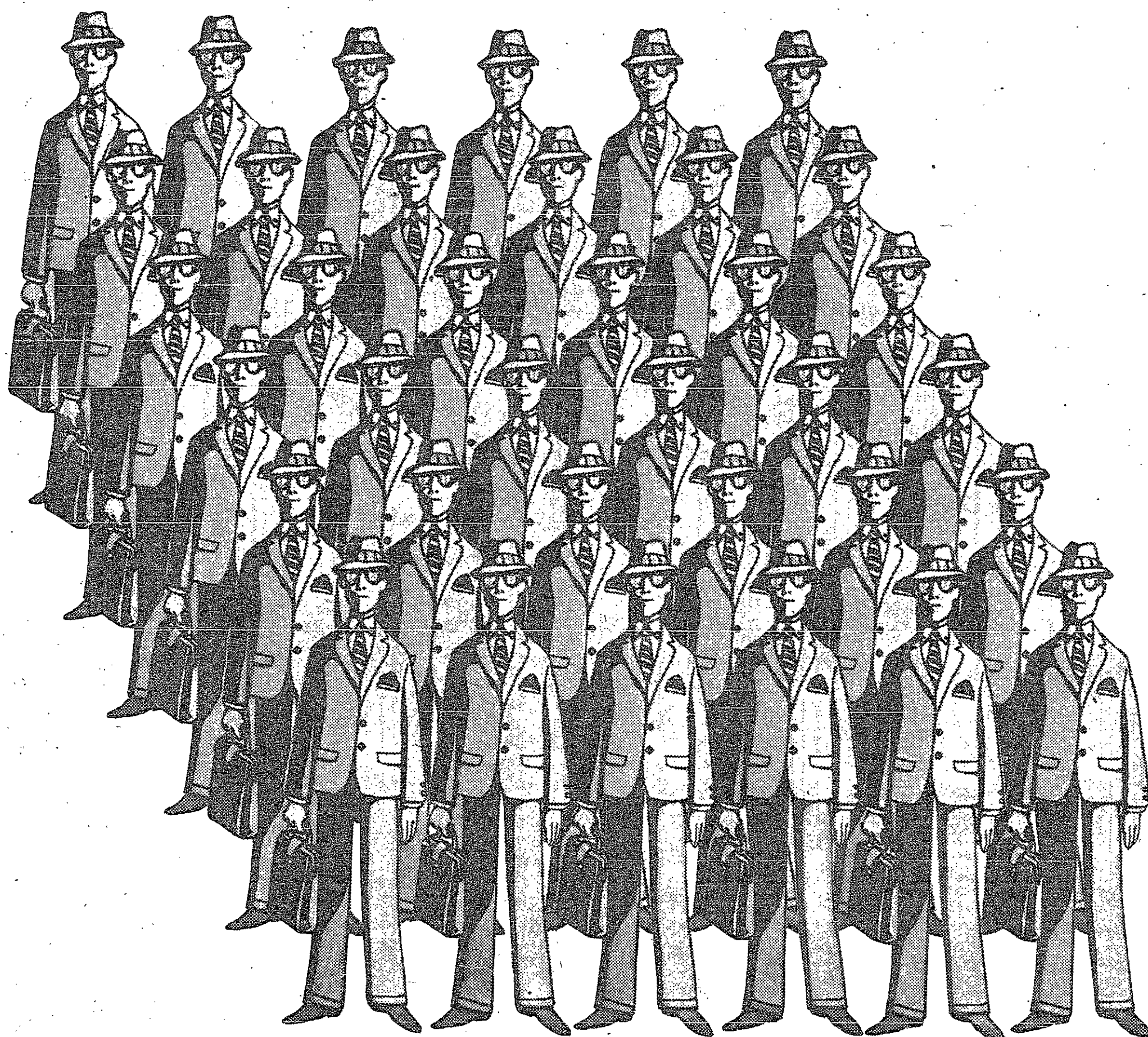
After six years of separation,

the boy is reunited with his parents. It could hardly be construed as the happy ending, though, for the years have left some indelible marks upon his thinking. Even as the book is drawing to a close, we find this 'child' looking in-

dulgent upon a man in prayer, amazed that a grown man could still not understand that "every one of us stood alone, and the sooner a man realized that all [men] were expendable, the better for him."

Attention men in gray flannel suits:

If you're interested in us, we're not interested in you.



We aren't looking for people who are looking for the life of an organization man.

We aren't looking for people who get along by going along.

And we aren't looking for people who tell the boss he's right when they know he's wrong.

We're the sixth largest industrial corporation in the country.

We'd like very much to be fifth.

And we figure the best way to make it is to hire people who aren't content to do things the way they've always been done, people who like to look for new ways to do things, and who aren't

satisfied until they find them.

Right now, we need some engineers, geologists, chemists, geophysicists, financial analysts, accountants, sales representatives, programmers and systems analysts. And we're looking for good people in various other fields.

We'll be coming to your campus soon.*

If you're looking for the same things in a company that we're looking for in a person, we'd like to talk with you.

It doesn't matter what sex, age, religion or color you are.

Just so you aren't gray.

Mobil.

Six art classes offered for spring DuPont awards \$33,000 to four MIT departments

Six art classes oriented towards beginners will be offered in the Student Center Art Studios during the spring term. Mrs. Lily Saari-nen, well known for her ceramic sculpture, will be guest lecturer for the semester.

Students who enroll in her Tuesday evening seminar, *The Language of Clay*, will have the opportunity to explore thoroughly this ancient medium.

Mrs. Mimi Luft will teach a new class using experimentally a variety of media, including acrylic paint, ink, clay, and wire. The class will be offered both Tuesday and Thursday evenings.

Daytime Class Offered

A class is being scheduled on a weekday afternoon for the first time to see if students have the interest and time to participate during the daytime. Mrs. Luft will also teach a Wednesday night class on portrait painting and life drawing, both realistic and expressionistic. A more traditional life-drawing class will be taught Thursday nights by Mr. Arthur Wood.

Mrs. Cora Pucci's new Saturday morning class will work with plaster, cement, wax, clay and wire. Design problems will be suggested but students may work on whatever they wish; they'll be able to take advantage of potter's wheels and concentrate on wheel-throwing techniques.

NSF finds MIT largest recipient of federal funds

A new National Science Foundation report showed that MIT was the largest recipient of federal money granted during fiscal 1965. MIT, which garnered \$59.6 million, was followed closely by the University of Michigan.

This report was issued to counter the complaints of midwestern congressmen that their universities were getting that short end of federal research funds. The NSF report showed that nine midwestern universities were among the top twenty-five in terms of total grants.

Senator Frank Lausche, of Ohio and Representative Melvin Laird of Wisconsin had threatened to form a bipartisan bloc to defeat research projects for coastal states on the grounds that the paucity of federal research funds for midwestern schools was producing a "brain drain."

Since the report is the first of its kind, no comparison with earlier federal largesse to midwestern schools is possible, but the report did stifle the congressmen's complaints.

The Foundation report showed that in fiscal 1965 the United States poured \$2.3 billion into colleges across the country, mostly through eight agencies. Biggest donors were the Public Health Service (for medical research), the Office of Education, and the National Science Foundation itself.

Students Preferred

Students interested in joining any of these classes are urged to come to the meeting Thursday night at 7:30 in the Student Center, room W20-425. The instructors will be on hand to answer questions about the classes. Registration forms will be available then and throughout that week. Students will have first preference in registering, but others at MIT may join the classes if space is available after the first week of studio classes.

In addition, students and other members of the MIT community can use the equipment and materials available in the studios during non-class time by paying a five-dollar semester fee. For this privilege, Mrs. Luft should

be contacted in room W20-423 at x7019.

Three Lecturers Invited

Other activities in the studios this semester include an exhibition from February 6 to 11 of work done by students and the teaching staff and talks by three invited speakers. Peter Benjamin will present a program on film making February 20; George Lockwood will speak on print making March 13; and Gardner Cox will lecture about portraiture April 10.

Films on art and artists will be shown once a month in room W20-425; the first on February 13 will feature brush, printing, and potting techniques. Another monthly feature will be tours of Boston galleries with Mrs. Luft by interested students.

MIT is among the seven schools in the Greater Boston area to receive educational grants from the Du Pont Company. Six awards totaling \$33,000 were received by Tech people. Three were in chemistry, one in chemical engineering, one in physics, and one in mechanical engineering.

Other schools in the area were Harvard University, Tufts University, Northeastern University and Wellesley College.

Nationally, grants totaling more than \$2,100,000 have been awarded this year to 214 colleges and universities in the Du Pont Company's annual program of aid to education.

This year, the major part is for strengthening the teaching of sci-

ence and engineering, particularly at the undergraduate level. When Du Pont's program was started, the grants were made primarily for university research. During recent years, however, the goals of the program have broadened considerably. This increased support and encouragement of teaching is intended to balance the increasing emphasis on research and development in the universities.

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(Continued from Page 4)

great unknown designed especially for the Institute.

Oregon's problems are not confined to only the air above. Down below, the students are charging that the faculty is hoarding power. The students want representatives on pertinent committees, such as the Committee on Educational Experimentation, Innovation, and Improvement. The debate has turned into a rather heated discussion, with neither side willing to let up. Discontent seems to be

the predominant theme at several of the country's colleges. What will be the result? The administrations could ask Uncle Sam for help, and that would kill two birds with one stone. The colleges would be peaceful and the jungles of Vietnam will become infested with angry young men.

Extremists on Campus

The Student Senate at the Idaho State University has gotten itself into hot water with the American Legion by inviting extremist groups to establish themselves on campus. The student body passed the resolution hoping to create constructive controversy. The American Legion is opposed to the establishment of Communist organizations at state supported universities. The ISU President is backing the students in this case.

Thinclads down Colby, 70-42

Coach Art Farnham's indoor track and field team finally met with success in the new year. They defeated Colby January 13, 70-42, for their first victory of the season. Many individuals turned in good performances Saturday in the informal MIT Invitational meet.

Against Colby, Tech's strong field team won all five events, as well as taking three seconds and three third places. Gordon DeWitte '67, Dave Osborne '67, and Art Von Waldburg '67 took the first three places in the 35 lb. weight throw to register the only sweep of the meet.

Greg Wheeler '67 and Kjell Karlsrud '68 combined to take the top places in the long jump. Pete Maybeck '68 and Gordon DeWitte placed first and second in the shot put. Art Von Waldburg and Dave Ogrydziak '68 were first and second in the high jump at 5-10. Steve Sydorak '68 and Jim Reid '68 placed first and third in the pole vault to round out the scoring in the field events.

Karman Still Undefeated

Bob Karman '67 continued his undefeated streak in the 1000 with a time of 2:25.2. He also tied with teammate Bob Dunlap '67 for first in the 600. Sam Guilbeau '67 was third in the 1000. Pete Peckarsky

'68 won the two mile in 10:19 and was followed by Jim Yankaskas '69 in third place.

Pole vaulter Steve Sydorak placed second in the low hurdles. Don Rosenfield '69 was third in that event. Bob Dunlap placed second in the dash, and Tom Najarian '69 was third in the mile to complete MIT's scoring.

Individuals Star

No score is kept in the MIT Invitational, but several Techmen did very well. Greg Wheeler and

Bill MacLeod '69 placed first and second in the long jump. The weight throw was overwhelmed by MIT as Gordon DeWitte, Dave Osborne, Art Von Waldburg, and Pete Maybeck placed 1, 2, 4, and 6.

Steve Sydorak was also an individual winner, clearing 13-6 in the pole vault. Tech's 880 yard relay team, composed of Bob Dunlap, Greg Wheeler, Steve Sydorak, and Bill MacLeod pulled through with a surprise victory.

Frosh sports

Courtmen upend Bates, lose to Colby, Wesleyan

By Paul Baker

Facing a full slate of contests before exams, freshman teams participated in nine games, compiling a 3-6 won-lost record.

Cagers 1-2

The hoopsters suffered two defeats while chalking up one victory. Colby overwhelmed Tech, 78-41, and a tall New Hampshire five nipped the engineers 70-68 in overtime. The frosh prevented a completely disastrous week by coming from behind to top Bates 81-66. Down 62-51 with three minutes re-

maining in the game, the engineers ripped off nine straight points to knot the score 62-62. Each of the five starters, Wheeler, Chamberlain, Vegeler, Mumford, and Vliet scored during this rally. In the overtime period, the engineers tallied 14 points before Bates scored and coasted to an easy victory.

Racketmen split

The squash team split its two games, mauling Lawrence 6-0 and losing 7-2 to Exeter, while the hockey, swimming and fencing teams bowed to their opposition. In their second game of the season, Tech's inexperienced pucksters yielded two goals in the closing minutes of the third period, losing 4-3 to Brown and Nichols. The engineers showed vast improvement and led much of the game.

Swimmers edged

After taking an early lead, the mermen were out-kicked 54-40 by Bates. Tech's only first places were in the 400 yard medley relay (Tom Bultman, Tom Walton, Steve Kinney, Louis Edelson) and in the diving. Bob Rorschach placed first in this event, while Jesse Heines captured the number two spot. Jim Bronfenbrenner and Don Riley each placed second in two races, Bronfenbrenner in the 200 yard butterfly and 200 IM and Riley in the 200 freestyle and 200 backstroke. Jeff Goodman took a third place in the 500 freestyle.

Fencers edged

In a tight meet with Concord, the fencers lost 15-12. The engineers did poorly in the sabre, losing 8-1. George Wood was the only Techman to gain a point in this competition. The Beavers won both the epee and foil, but could not overcome the deficit. Paul Murphy, undefeated this year, won all three of his matches in the epee.

The matmen pounded WPI, 41-0. Seven engineers registered pins, while only Horatio Daub (154) and John Spenpeck (177) won by points.

Wilson sets record

In the Knights of Columbus track meet Ben Wilson shattered the freshman indoor mile record with a time of 4:16. The previous record was held by Sumner Brown '66.

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Lose to Amherst

Swimmers nip Wesleyan

Tech swimmers, led by Mike Crane '67, edged Wesleyan 48-47 in their toughest meet to date, Saturday, January 14, but the mermen went on to lose badly to Amherst last Saturday, 71-24.

Wesleyan began by winning the 400-yard medley relay due to a Tech disqualification by a false start and continued to remain in the lead until the last relay. In the 200-yard freestyle, Lee Dilley '69 and Bill Carson '69 finished two-three behind Wesleyan's Goldkamp, who swam in 1:55.1.

Mike Crane tied his varsity record in the 50 free at 22.7 seconds. Wesleyan's Gallas and Miller slammed the mermen in the 200-yard with Rich Dorman '69 third. Dan Gentry '68 won the diving event.

Gallas was too much for Dilley in the 200 fly as they finished one-two, Gallas in 2:11.9.

Mike Crane then broke the MIT varsity record in the 100 free at 50.7 with Bill Stage '69 close behind. Luis Clare '69 broke his record in the 200-yard backstroke recording a time of 2:11.5. The Wesleyan team of Gallas and Miller slammed the engineers in the 500 freestyle swim.

To keep alive, the engineers needed both a first and second in the 200-yard breast stroke. From previous experience, it was known

that Captain Larry Preston '68 could place first. The meet depended on Tom Nesbitt's coming in second. In a tremendous race Nesbitt placed second behind Preston. MIT was still alive for the final relay: Dilley, Crane, Stage, and John McFarren '68 broke the 400 freestyle relay record by three seconds in 3:23.1.

Lose to Amherst
The mermen did not fare so well against Amherst. The engineers amassed only one first place which came from diver Dan Gentry.

Dilley placed second in the 200-yard freestyle behind Amherst's Phillips who recorded a 1:54.5. Crane and Merrill finished two-three in the 50 free. Clare placed second in the 200-yard I.M. Dilley was outswum by Van Oss and Pelzer of Amherst, making him third.

Crane was slammed in the 100 free, as Amherst's winning time was in 49.9 seconds. Bill Wagner '69 finished second in the 200 backstroke. Clare was 2nd in the 500 freestyle, unofficially breaking an MIT record.

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IM volleyball opened to graduate students on departmental basis

Graduate students will be given an opportunity to exhibit their prowess on the volleyball court this winter as a special division is being formed for graduate students and faculty members in the intramural volleyball league. The teams should be organized predominantly on a departmental basis, but any group which consists of graduate students is eligible to enter a team. Sign up sheets will be posted on the bulletin boards outside each of the department headquarters later this week. Those organizations other than graduate departments, Ashdown House, or Westgate, desiring information about how to enter a team in the league should call Bob Burpee at x2280 between 12:30 and 1 pm any weekday.

Final standings in IM basketball

A Division			
League I		League II	
1. Burton "A"	1. Fili "A"	1. Fili "A"	1. Fili "A"
2. SAE "D"	2. Lamb Chi "A"	2. Lamb Chi "A"	2. Lamb Chi "A"
3. AEPI "A"	3. Beta	3. Beta	3. Beta
4. NRS "A"	4. Phi Delt	4. Phi Delt	4. Phi Delt
5. Sigma Phi	5. Pi Lam	5. Pi Lam	5. Pi Lam
6. Epsilon	6. SAM "A"	6. SAM "A"	6. SAM "A"
7. ATO "A"	7. Senior House	7. Senior House	7. Senior House
8. DU			
8. Sigma Chi			

B Division			
League I		League II	
1. Theta Chi "A"	1. Delt	1. Delt	1. Delt
2. Theta Delta	2. Phi Kappa Sig	2. Phi Kappa Sig	2. Phi Kappa Sig
3. Chi "A"	3. Lamb "B"	3. Lamb "B"	3. Lamb "B"
4. Burton "C"	4. Baker "B"	4. Baker "B"	4. Baker "B"
5. Fili "B"	5. TEP	5. TEP	5. TEP
6. Phi Mu Delta	6. Sen House "G"	6. Sen House "G"	6. Sen House "G"
6. SAM "B"			

League III			
1. Baker "A"	1. DKE	1. DKE	1. DKE
2. Student House	2. SAE "E"	2. SAE "E"	2. SAE "E"
3. ZBT "A"	3. East Campus	3. East Campus	3. East Campus
4. Sigma Nu	4. Pi Lam "B"	4. Pi Lam "B"	4. Pi Lam "B"
5. Bexley	5. Sigma Phi	5. Sigma Phi	5. Sigma Phi
6. AEPI "B"	6. Epsilon "B"	6. Epsilon "B"	6. Epsilon "B"
	6. Phi Kap Theta	6. Phi Kap Theta	6. Phi Kap Theta

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Aerospace Divisions in Southern California

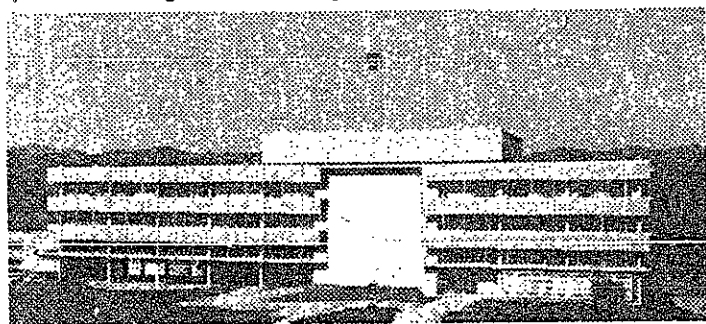
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ATS (Applications Technology Satellites)
AIM-47A/AIM-4E Missiles
VATE Automatic Checkout Equipment
CORDS

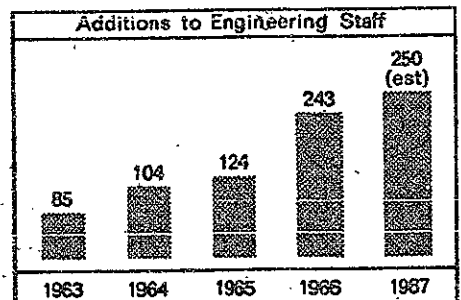
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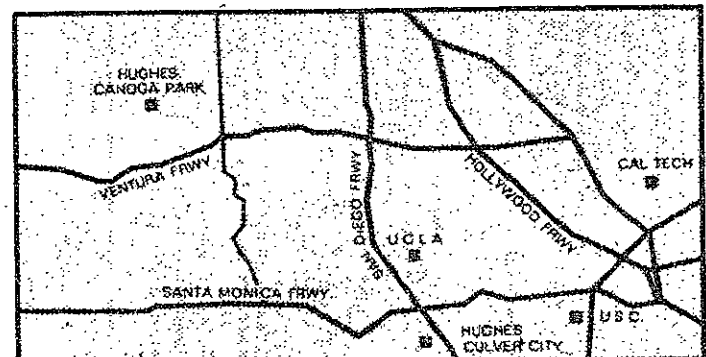


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CAMPUS INTERVIEWS

February 14 & 15

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Bridge tourney to be held here; three pairs qualify for nationals

The 1967 Eastern Intercollegiate Bridge Tournament will be held for the Regional Par-Hand play in the MIT Student Center during off, semi-final stage of the 1967 the weekend of February 25-26. National Intercollegiate Tournament, as a result of their performance at the MIT Bridge Club's duplicate game of January 1968 and Mike Chasan '67, Bill Horton '68 and Joe Viola '69, and Ken Lebensold and Phil Selwyn, will compete against other players from the New England area February 18-19 at the Boston University Student Union.

The MIT Bridge Club will hold its full master point game for February Saturday at 1 p.m. in room 407 of the Student Center.

Grapplers tie for third in quad

By Ann Varteressian

In the last two weeks, the varsity wrestlers competed in two New England conference dual meets, winning both, and tied for third in a quadrangular meet with Springfield, Franklin and Marshall, and Amherst.

In the quadrangular meet, held at MIT last weekend, the Techmen tied for third with Amherst with 13 points. Springfield took the meet with 35, followed by the Franklin & Marshall team with 31.

Gregg Erickson '69, wrestling at 130, lost his first two matches, first to Warren Long of Amherst, 11-2, and then to Blair Ames of Franklin and Marshall, 7-2. Jack Maxham '69 lost his first contest

to John Fomiak of Franklin and Marshall, 6-1, but came back in the second round to pin Steve Sumida of Amherst in 3:32. Jack lost his final round to Tom Stone of Springfield, 11-4. At 145, Jack Wu '68 won his first round match against Harvey Kaltsas of Amherst, 7-2, but lost his next two matches. Jack came out on the short end of a 9-7 squeaker, losing to F&M's Dick Krause on riding time. In the final round, Jack lost a 7-3 decision to John Romas of Springfield. John Fishback '68, 132, lost to Dave Mart of F&M, 4-3, and to Amherst's John Davidson, 11-8. Julian Schroeder '69 lost his first match, 15-4, to Jim Clair of Franklin and Marshall, and

then beat Amherst's Pete Dorland, 6-0. In the final round of the double eliminations, Julian came up against Clair again, and lost 8-1. At 167, Hank DeJong '67 won his first match with a 6-2 decision over Larry Lincoln of Amherst. Hank dropped his next two matches, losing an 11-4 decision to F&M's Bruce Leonard, and losing 6-4 to Springfield's George Popella. Keith Davies '69 wrestled 177 for MIT, and in his first match pinned Dick Sullivan of Amherst in 5:20. In the second round, Keith was pinned by Dave Krikelaier of F&M in 4:30. After pinning Springfield's Frank Peraino in 4:51, Keith once again came up against Krikelaier, and lost a close 5-4 decision. An escape by Krikelaier in the last 40 seconds decided the match. Freshman Fred Andrea wrestled heavyweight for the varsity, but the points he collected could not be counted in the final tally. Fred defeated both his opponents easily, taking a 6-0 decision over Amherst's Kim DeRiel, and a 10-0 decision over F&M's Dave Lehman.

WPI easily pinned

A week earlier, the varsity defeated WPI in dual meet competition, 24-7. Bill Harris '68 took Jeff Tamolonis down in 36 seconds and pinned him in 1:46 of the 123-pound match. At 130, Gregg Erickson took a 6-2 decision over Rich Robey. John Reynolds '67 and Rit Simoneau wrestled to a 2-2 draw at 137. At 145, Jack Maxham lost his first dual meet contest of the year to Pete Grosch, 4-2. After a 35 second takedown, John Fishback went on to defeat WPI's Scott Wilson 6-2 at 152 pounds. Julian Schroeder defeated Russ Bone 6-2 at 160, and Hank DeJong '67 beat George Pomfret 4-2 at 167. Chris Davis '69 and Ralph Eschborn drew, 4-4, at 177, and at Heavyweight, Dave Schramm capped the meet with a 12 second takedown and 1:36 pin against Jim Braithwaite.

Wesleyan also dropped

The WPI win came on the heels of a defeat of Wesleyan, 21-14, leaving Tech as yet undefeated in New England dual meet competition. Outstanding in the Wesleyan meet were Bill Harris, who took an easy 9-0 decision against Dave Patrick with a takedown, near fall, and reversal added to 2 points riding time; Jack Wu, who pinned Chip Gray in a cradle in 5:49 of the 137-pound match; and Dave Schramm, with a 3-0 decision over Dusty Carter, last year's frosh New England champ.

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Cagers win 3 over intersession

With a nine-game winning streak, the cagers have extended their season record to 14-3. In the last six games, the engineers have downed Colby, Bates, New Hampshire, Stevens, Brooklyn College, and Coast Guard.

Stevens surprises Tech

At Hoboken, New Jersey, the Beavers found the going surprisingly rough against a determined Stevens Business team. Playing a slowly deliberate style of basketball, the Stevens squad kept the game close as Tech's man-to-man defense was stymied. Early in the game, the engineers were down 8-2, but they switched to a zone defense midway through the second quarter and pulled even at the half. Stevens stayed in the game mainly because they hit on 55% from the field.

In the second half, the cagers stayed in their zone and began to get some offensive rebounding. The front line and Alex Wilson '67 in particular began to hit underneath and went on to a 61-47 win. Wilson was high point man with 25. Bob Hardt '67 hit for 14, while Dave Jansson '68 had two more than that. Wilson also contributed 14 rebounds.

Brooklyn College also tough

Against Brooklyn College, the team also found the going somewhat rougher than they had anticipated. Brooklyn had a short guard who was a fantastic dribbler and kept them in the game. Once again, the Beavers began with a man-to-man defense, and suddenly found themselves down 10-1. They then shifted to the zone which had been so effective the night before. Once again, the zone worked, as the engineers cut the lead to 33-31 at the half. Jansson kept the hoopsters in the contest in the first half with 12 points.

Once again, the Techmen came back in the second half to win going away, 71-64. With two minutes left, the Beavers held on to a 20 point lead, which slowly disappeared as the starters were removed from the game. Jansson finished with 18 points, followed closely by Wilson with 17. Bob

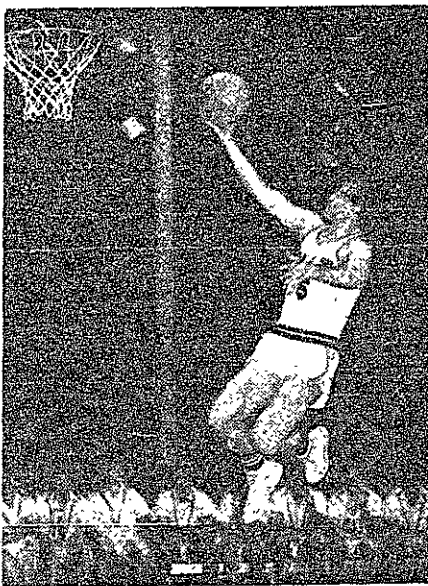


Photo by Bill Ingram

Tom Hinricks '67 goes high into the air to add two more in Tech's sparkling victory over UNH.

Hardt had 14 points and Ray Ferrara '67 had 10. Wilson had 12 points in the second half, with Ferrara scoring 6 to pace the MIT attack. Wilson also pulled down 14 rebounds, with Hardt taking 13 off the boards. This points up the big height advantage that the cagers enjoyed in the game.

Coast Guard trounced

The team made it nine in a row Saturday with a resounding trouncing of Coast Guard, 100-63. This time, the Tech scouting was accurate, as the man-to-man defense worked very effectively. The engineers jumped off to a quick 10-1 lead, and maintained a 10 point lead through the first half.

The closest Coast Guard could come in the second half was 8 points near the beginning. With three minutes left, the Techmen were leading 85-57. At this point, Coach Jack Barry put in his second team. This group surprised everyone, as they actually increased the lead to the final margin. Dan Green '68 played especially well, scoring 6 points. Walt Suchon '69 also dumped in 6. The leading scorer was Hardt, with 28. The 100th point was a tip-in by Ross Hunter '69.

Wilson, Talus star

As an addition to their 14-3 record, the cagers had two individual

stand-outs in the New Hampshire game. Alex Wilson '67 scored 18 points to bring his three-season total to 1066 and break the school record. And, it was recently announced that guard Roy Talus '67 was named to the weekly Eastern Collegiate Athletic Conference College Division All Star team on the strength of his 20 points and 5 steals in this game.

The next game will be important to MIT, as they take on one of the best teams in the midwest, Wayne State, Saturday at 8:15.

On Deck

Wednesday, February 8

Basketball (JV)—Boston College, home, 7:30 pm

Wrestling (JV)—Rhode Island, home, 7 pm

Fencing (V)—Harvard, away, 7 pm

Thursday, February 9

Hockey (V)—Babson, home, 5 pm

How They Did

Basketball

MIT(V) 100, Coast Guard 63

MIT(V) 71, Brooklyn Col. 64

MIT(V) 61, Stevens 47

MIT(F) 81, Bates 66

UNH 76, MIT(F) 68

Wrestling

MIT(V) tie for 3rd in Quadrangle

MIT(V) 21, Wesleyan 14

MIT(V) 24, WPI 7

Hockey

MIT(V) 4, Air Force 3

MIT(V) 3, Wesleyan 2

Babson 5, MIT(V) 1

Connecticut 8, MIT(V) 3

Browne and Nichols 4, MIT(F) 3

Swimming

Amherst 71, MIT(V) 24

MIT(V) 48, Wesleyan 47

Has 1066 points

Wilson sets scoring mark



Photo by Bill Ingram

Co-captain Alex Wilson '67 is the new holder of Tech's all-time scoring record with 1066 points.

Two highs were reached by the varsity cagers in their recent contest with New Hampshire. The Senior co-captain Alex Wilson scored 18 points, setting a new all-time Tech scoring mark. The previous record of 1058 was held by Bill Eagleson '65. With nine games left, Wilson's three-season total stood at 1066 points. In addition, it was also announced last week that Roy Talu's '67 has been named to the weekly Eastern Collegiate Athletic Conference College-Division All-Star team. Roy was awarded the spot for his performance against New Hampshire, where he scored 20 points and had five steals.

Wilson Holds 5 Records

At this point Wilson holds three

Down Air Force, Wesleyan

Pucksters place second in Invitational Tournament

By Jon Steele

The MIT skaters won three of their six games over the past three weeks, boosting their season record to 4-6 and placing second in the MIT Round-Robin Tournament here over the weekend.

Down Wesleyan, 8-2

Before finals, the icemen traveled to Wesleyan, where their accurate shooting led them to an 8-2 victory. Don Bosack '67 led the scoring with two goals and an assist while Larry Hall '67 collected one goal and three assists.

The next opponent was the University of Connecticut at Storrs, but Connecticut jumped off to a 5-1 lead in the first period to eventually win 8-3.

Edge Air Force In Overtime

The team then spent all of intersession practicing for the MIT tournament last weekend, and the work paid off. In the opening game the Techmen faced the Air Force Academy and skated their best game to date this season. The first period was a scoreless tie with good fast play on both ends of the ice, but Air Force took the opening face-off of the second period and slapped it past MIT goalie Steve Eriksen '69. Bob Petkin '68 retaliated twelve minutes later for MIT. At the opening of the third period Captain Bob Smith '67 required only fourteen seconds to score on a pass from Harris. After another ten minutes of hard fighting Scott Rhodes '69 tallied for Tech and Niel Carson scored for the Falcons. It was at this point, the score 3-2 for MIT and less than three minutes remaining that

Smith accidentally tapped a weak shot past his own goalie to tie the game and sent it into a sudden-death overtime period. Smith redeemed himself two minutes later though by flicking the winning shot past the Air Force goalkeeper.

Saturday morning the team kept its spark going and easily out-hustled Wesleyan 3-2. Despite the close score MIT was in control throughout, taking forty shots on the Wesleyan goal compared against twenty-two shots for Wesleyan.

Lose To Babson

In the other games the Babson Brewers had also beaten Air Force and Wesleyan, setting up the championship game Saturday night. The Techmen took the ice in the first period looking as if they were headed for the trophy.

They kept pace with the fired up Babson squad and after several near misses Petkin slapped in the puck off a perfect center from Satow. In the second period, however, Babson scored three goals, taking twenty-two shots on Eriksen.

Early in the third period Bruce Alton of Babson knocked in his third goal of the night to clinch the trophy.

Despite the home team's disappointment the MIT tournament turned out to be a tremendous success. For the first time this year our rink was ringed with spectators and they were treated to exciting hockey. Both the team and the spectators showed some of the spirit which has been so lacking this year, the kind of spirit which can lead to a winning season.

Look To NCAA

What lies ahead for the engineer five and Alex Wilson in particular? Alex has set his sights on the All New England first team, which he stands an excellent chance of making. And the team's current 14-3 record gives them high hopes of an NCAA regional bid, first in MIT's history. The crucial points in this pursuit could be the Wayne State game Saturday and the Northeastern game a week from today. Whether or not they make it, this season has undoubtedly marked the revival of varsity basketball as a spectator sport on the MIT campus.

The Benchwarmer

AA agenda includes proposal on women in athletics at Tech

By Tony Lima

The MIT Athletic Association will hold a meeting Thursday. There are two items on the agenda. One of them, the nominations for officers for the coming year, will not be of much interest to the MIT community. The other, however, could have far-reaching significance. At this meeting, a proposal will be drafted on the subject of women in athletics.

Coeds in athletics

No matter what your opinion on this subject, the fact remains that the Tech coeds are participating in athletics, both intramural and interscholastic. The women's sailing team has long been recognized as one of the best in the East, if not the country. The more recently initiated fencing team has not enjoyed the immediate success they had hoped for, but are enthusiastic, which is all that is necessary to keep a team operating. The girls have also fielded a crew, with several races each year. In intramural sports, the coeds have just begun this year and have entered McCormick teams in bowling, sailing, volleyball, and badminton, which is not bad for their first year. There will no doubt be even further participation in future years.

Kivisild heads movement

Prime mover in this new wave

has been Maria Kivisild '69, an ex-Canadian backstroke champion in swimming and excellent tennis player. Maria is the acting athletic chairman for McCormick, and has been instrumental in the movement toward women in athletics.

Three proposals afoot

So far, the AA has taken no official action on this subject. Kim Winters '69, fencing manager, has visited a meeting of the Varsity Manager's Council. The IM Council gave a unanimous vote to amend its constitution, and thus, grant a seat to the Association of Women Students. However, there are several proposals which will be considered Thursday. One is, naturally, to keep women out of athletics entirely; however, it is generally conceded that this does not stand much chance. Another is to incorporate women directly into the existing structure of the AA. The third is to have the women set up an AA of their own, under the auspices of the AA, as the IM Council is, but with a structure of its own. The president of this would be the only member to have a seat on the AA Executive Committee. It is extremely likely that one of the two latter proposals will be adopted. Whichever is, the AA will undoubtedly be changed radically in the near future.

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